TECHNOLOGY DEPARTMENT

Member Associated Business Papers, Inc.

**The Newspaper of the Industry**

Member Audit Bureau of Circulations.

# AIR CONDITIONING AND REFRIGERATION News

Issued Every Monday at 450 W. Fort St., Detroit 26, Mich.

**December 27, 1948**

Vol. 65, No. 17, Serial No. 1032

Established 1928.

PUBLIC LIBRARY DEC 30 1948 DETROIT

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1948, by Business News Publishing Co.

## INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
The More You Eat, The More You Want
To Envy Is Human
Potentates Gripe, Too
Too Many Dealers?

### *Story of the Week*

Professional football fans—whose numbers are legion in this industry—should get a kick out of this story:

"Bulldog" Turner, the gigantic center and line-backer of the Chicago Bears, is a "character." He drives a Crosley automobile, for example. (If you can imagine the 6-foot-three, 250-pound Turner coiled up inside a midget auto like the Crosley, you can picture in your mind's-eye the stage-setting for this anecdote.)

After practice late one evening, "Bulldog" was driving up Boul' Mich' in Chicago, minding his own business, enjoying the scenery, when . . . crash! He had tangled with a city-owned dump truck.

Driver of the latter vehicle jumped out of his cab, shook the little Crosley car, and dared the driver to "come out and fight like a man."

Slowly and deliberately, Turner emerged and unwound himself to his full height and size.

"Pardon me, sir," apologized the disappearing dump-truck driver. "I've made a terrible mistake."

### *The More You Eat, The More You Want*

All sorts of advertised food "snacks," from popcorn to candy bars, have adopted the slogan: "The more you eat, the more you want."

It's a plausible slogan, too; because desire leads to consumption; and the more you consume, the more you desire. There are practical limits to consumption, of course, (the human stomach can hold only so much food at one time) but there are no theoretical limits to desires.

This explanation of the natural expansion of wants, as incomes and production rise together, blueprints one of the most important gears in America's almost miraculous business machine. It also explains a great deal about the confusion which exists in the minds of many present-day Americans, and why they seem so willing to abandon the Principles which made America Great.

We're all eating more, living in better houses, wearing more and finer clothes, and enjoying more mechanical labor-savers and amusement devices than any other people in all the world's history. Yet, we're snarling, snapping, and sniping at one another because we don't have more of the same, or because somebody else has more than we do!

The price of sirloin steak is too high, we scream. (Yet we have more to eat every day than other peoples do in a week.) The boss's wife owns a mink coat, while mine has to be satisfied with a squirrel stole, or a hooded cloth cape. (All over the world women are huddling around charcoal fires, and sleeping four in a bed, trying to keep from freezing to death.) A neighboring family goes to Florida for the winter; whereas all we can afford is a two-week's summer vacation at Yellowstone National Park in the family flivver. (Even in plushy England, "pleasure driving" in an automobile is forbidden.)

Isn't there a lesson in this comparison? What are we crying about?

From boyhood days, a few of us may remember an old church hymn that ran: "Count your many bless-

(Concluded on Page 6, Column 1)

## *Minnesota Warns Against 'Injurious' Dealer Give-Away*

ST. PAUL, Minn. — A warning against the use of "give-away" promotions by electrical appliance dealers and others in Minnesota has been issued by the trade promotion division of the State Department of Business Research and Development.

"Electrical appliance dealers have requested information regarding the legality of various 'give-away' promotions," the department says in its current News Letter. "The interpretation of these statutes by the division of trade promotion is that merchandise cannot be given away if the act is for the purpose or has the effect of injuring competitors or destroying competition.

"Statements comparable to: 'This

(Concluded on Page 4, Column 2)

## Washer Sales Drop 11.8% In October

CHICAGO—Factory sales of washing machines totaled 382,400 units in October, down 11.8% from the September figure of 433,919, and 3.7% under the 397,113 sold in October of 1947.

Sales for the first 10 months of 1948 totaled 3,764,444 units, an increase of 22.4% over the same period last year, and virtually equalling the total for all of 1947, highest in the industry's history.

Ironer sales in October of this year totaled 38,517 units, compared to 37,308 in September, and 58,605 in October, 1947.

## *Pre-War Tactics Return In Dealer Selling*

NEW YORK CITY—Steps being taken by appliance dealers to combat the current slump in sales they have faced for the past two months were pointed up in an article recently published by the *Wall St. Journal.*

The *Journal,* in making a nation-wide survey of conditions in the field, found dealers reviving some pre-war devices to tickle consumer interest and spur salesmen on to greater efforts.

In Dallas, for instance, it found

(Concluded on Back Page, Column 1)

## IN THIS ISSUE

**If the fine points of Reg. W** have been bothering you, you will find some recent interpretations on **page 18.**

* * *

**First heat pump in Chicago area to** use both ground and air coils has been installed in a suburban home. Story on **page 23** gives the highlights.

* * *

**Overloading, the chief cause of** service calls on water coolers, can be avoided by careful figuring of inlet temperature and peak load. Earl Jennings explains on **page 19.**

* * *

**Looking for a NEWS article you** want to read again but can't find? The index of important features appearing in the NEWS during 1948—on **pages 20-21**—may help you.

* * *

**NARDA's managing director, during** a cross-country tour, learned that dealers are faced with 13 major problems. To find out what they are, turn to **page 7.**

* * *

**Departments:** What's New, **pages 14-15** . . . Key to Air Conditioning, **page 16** . . . Editorial, **page 12** . . . Patents, **page 22** . . . World Trade News, **page 17** . . . Off the Chest, **p. 8.**

## Winter Marts Set for Jan. 3 Opening Rush

CHICAGO—Here's the lineup for the midwinter Marts and the housewares show coming up here in January.

Jan. 3-15. Homefurnishings markets at the Furniture Mart and the Merchandise Mart.

Jan. 13-20. Housewares Show at the Navy Pier.

While the Marts and the Housewares provide something of a lap-over, this factor doesn't seem to have done very much towards relieving the usual crowded hotel rooms situation.

A number of new refrigerator and other major appliance models will make their bow at the Mart, and there may also be some new policy announcements that will make news.

Newcomers among the appliance exhibitors at the Furniture Mart include Thor Corp., Electromaster Inc., Kalamazoo Stove, Landers, Frary & Clark, One Minute Washer, Holland-Rieger Div. of Apex, and W. W. Welch Co.

New tenants at the Merchandise Mart include Schaefer freezers, Midwest kitchens, and Dorby infra-ray cookers.

The National Broadcasting Co. will have its new television station WNBQ in operation at the Merchandise Mart and some mart events may be televised.

The Housewares show at the Navy Pier, Jan. 13-20 (Thursday to Thursday, excluding Sunday) is under the sponsorship of the National Housewares Manufacturers Association, and a number of appliance firms will have exhibits. It will mark the first time this show has been held at the Navy Pier, which is located at the foot of Grand Ave. and Lake Michigan.

## Sears Cuts Prices on 2 Kenmore Washer Models

CHICAGO—Sears, Roebuck & Co. has reduced prices on two models of its Kenmore automatic washer, it was revealed here recently.

Price of the regular model was lowered from $224.95 to $194.95 and the price of the "suds saver" model was dropped from $254.95 to $234.95 in Chicago area stores during the last week.

Sears officials declared that this price reduction, like the one on refrigerators made a few weeks ago, did not mean that inventories were overflowing or backing up.

## *Producers Meet To Map Emergency Mobilization Plan*

WASHINGTON, D. C.—Representatives of manufacturers of mechanical refrigerators and home freezers, meeting here this month with the National Security Resources Board, explored preliminary steps to a program that would permit quick mobilization of the industry's resources in the event of a possible national emergency.

Production controls used during the last war—L-5, L-23, and L-27 limitation orders—and the CMP (Controlled Materials Plan) were reviewed, and the industry was asked to give its recommendations on a program to handle any emergency situations.

Some of the subjects covered were the disposition of such stockpiles as might be on hand should an emergency arise, simplification and standardization of military and essential civilian requirements, pooling of production, and the selection of personnel for the government departmental staff that would deal with the industry.

Those attending the conference included: H. C. Patterson, Nash-

(Concluded on Back Page, Column 2)

## Hotpoint Automatic Washer Bows Soon

CHICAGO—Hotpoint, Inc., will bow in its first automatic washer next month and will have units in the hands of all its dealers by the second quarter, James J. Nance, president of the company, has announced.

Nance said that the new automatic will be on exhibit in the National Housewares Shows here, Jan. 13-20. First shipments to dealers will also be made during the same month.

The washer, he declared, marks the completion of Hotpoint's $20,000,000 post-war product development and plant expansion program. The new appliance will be manufactured in the company's former range plant here.

Several million dollars of additional capital was invested in the plant to provide it with facilities for washer production, Nance said. When full production is reached, several hundred men will be employed.

Hotpoint earlier this year moved its range and water heater operations to its new 1,000,000-sq. ft. plant at Cicero, Ill. The new plant is said to be the largest range manufacturing plant in the country designed to produce 12,000 ranges per week. It is now working to capacity, Nance said.

## *Room Cooler Gift Certificate Ad Gets Response*

NEW YORK CITY—An advertisement suggesting a gift certificate for a Fedders room air conditioner as a Christmas present, which ran in the *New York Times* early in December, drew a "surprising number of replies," company officials declared.

The advertisement was published over the signature of Fedders-Quigan Corp., and carried reply coupons for both L & P Electric Co., metropolitan New York distributor, and Igoe Brothers, Inc., Newark, N. J., distributor.

A reproduction of the gift certificate was a part of the advertisement, and the point was made that the gift certificate would permit installation of the room air conditioner any time within a year.

Analysis of some of the replies showed that there was considerable interest on the part of many wives of business executives and professional men.

## Plant Lay-Off Stories Result In False Impression

### *Some Are Genuine But Others Are for Model Changes, Inventorying*

DETROIT—With the "rumor factory" busy as can be shutting down plants in the refrigeration and appliance industries, it's worth while to analyze the situation and separate the facts from rumor and misconceptions.

There is no denying that there have been some layoffs of production workers because of cutbacks in production. It is likewise true that there have been some plant shutdowns for changeovers and year-end inventory taking that have been sensationalized in the public and trade press as "plant closings" caused by decline in business.

A case in point is that of the Easy Washing Machine Co. in Syracuse, N. Y. Press reports a fortnight ago had the company "halting operations" and "releasing 2,400 employes."

In correcting this misinterpretation of what the company is doing, Easy's president H. Paul Nelligan declared that while production operations were curtailed for year-end inventory and re-tooling program, the plant was not shut down, that many departments were operating, and production employes were not released, but temporarily laid off for inventory and retooling, and that production would be resumed after the first of the year.

York Corp., which on Dec. 17 announced a lay off of about 200 production employes amounting to about 7% of the hourly paid group, did a fine job of public relations in announcing the move, pointing out, for one thing, that even after the contemplated layoff there will still be about 2,850 employes in the production departments compared with 2,650 a year ago, and compared with an average of 1,436 employes during the pre-war period 1936-1939.

The York Corp. statement said in part:

"In commenting on this layoff, Stewart Lauer, president of York, said that field reports still indicated a volume of business somewhat in excess of last year. He added, however, that buying trends had changed noticeably resulting in an accumulation of inventory greatly in excess of current needs. It therefore becomes necessary to curtail production until a proper balance in inventory position can be achieved.

"This change in buying trends indicates that the purchasers of industrial capital equipment are hesitating to make commitments in advance of their absolute needs. This in contrast with the past two years when commitments were made well in advance of requirements to assure themselves of delivery and installation when needed.

"In the case of consumer products, merchandised by distributors and dealers, the distributors are finding it necessary to reduce their own inventories and are buying as close up as possible to their consumer requirements, many of which are seasonal in nature. Last year distributors stocked more heavily during this same period to assure themselves of a competitive position from a delivery standpoint.

"Lauer stated that he could see no good reason at the moment why total employment would not return to present levels at a later date when the inventory adjustment was completed. He said that the indicated demand for their refrigeration and air conditioning products, which had been greatly diversified and im-

(Concluded on Back Page, Column 4)

## Weatherwax Named Vice President of ACRMA

WASHINGTON, D. C. — Kenneth A. Weatherwax, vice president and general manager of Acme Industries, Inc., has been elected vice president of the Air Conditioning & Refrigerating Machinery Association for the coming year.

K. Weatherwax

Since Weatherwax took over the operational direction of Acme Industries in 1930, the company has assumed an increasingly important position in the industry, being especially known for its production of shell-and-tube heat transfer equipment.

## Textile Mill Air Cooling Bill To Be Introduced

ATLANTA—Kenneth Douty, Georgia director of the CIO Textile Workers Union of America, stated recently that a bill seeking mandatory air conditioning of Georgia textile mills will be introduced at the coming session of the state legislature.

"The bill, which will be introduced at the request of the union, would provide for the regulation of temperature and humidity in the mill work rooms," Douty said.

## 'Open House' Heralds Hajoca's 37,000-Sq. Ft. Jacksonville Warehouse

JACKSONVILLE, Fla. — Hajoca Corp., manufacturer and wholesaler of plumbing, heating, industrial, and refrigeration supplies, heralded the opening of its modern, block-square office and warehouse building at 929 East Bay St. here with an "open house" party attended by 612 persons.

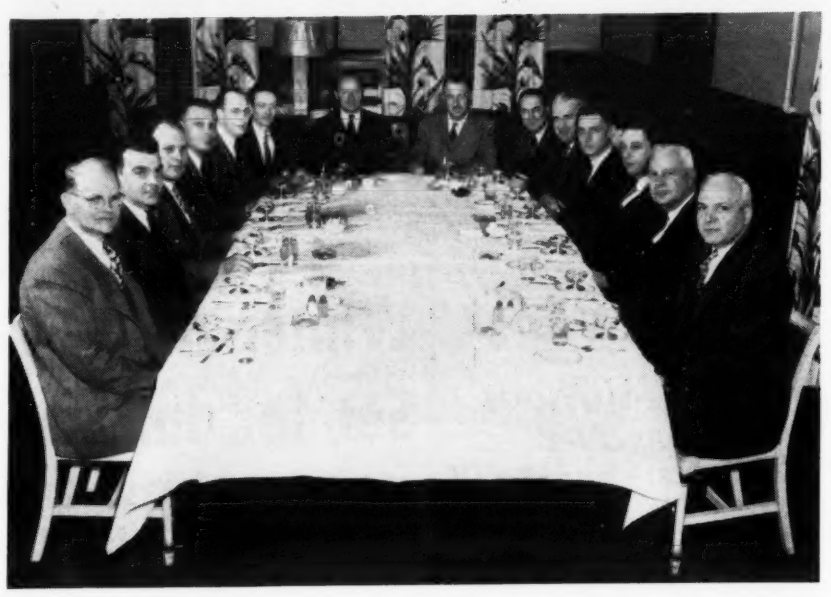
On hand for the occasion were Hajoca's president, W. A. Brecht; C. C. Lowry, vice president-general sales; John T. Brown, Jr., treasurer; V. A. Hazzard, general purchasing agent; S. Muir Stroh, plumbing and heating sales manager; and Harold E. Tippett, manager of the refrigeration division. Hosts were James L. Berry, Jacksonville branch manager, and Clarke Hogan, Georgia and Florida zone manager.

According to Hajoca, these new and larger quarters will permit the expansion of its 27-year-old Jacksonville branch. Already refrigeration supplies and parts have been added to its complete stock of plumbing, heating, and industrial supplies.

The structure has more than 37,000 sq. ft. of floor space, plus an ample storage and loading yard. Radiant heating, fluorescent lighting, acoustical ceilings, and scientific ventilation are a few of the building's features. More than 9,000 sq. ft. are devoted to a pipe shop.

Both Georgia and Florida zone offices and Jacksonville branch offices are housed in this building.

## Gathered for Briefing on Baker's '49 Program



Factory executive personnel of the Baker Ice Machine Co. gathered at a meeting in Portland, Me., recently for a presentation of Baker's development and sales program for 1949. In the group were W. T. Martin, industrial engineer; C. A. Garland, manager, order service department; J. W. Hammarberg, production manager; A. W. Wood, superintendent of manufacturing; H. D. O'Rourke, Jr., assistant to the general sales manager; W. L. Ackler, design engineer; A. F. Milton (left at head of the table), secretary and treasurer; T. S. Pendergast, general manager; C. L. Hildreth, director; P. J. Donahue, office manager; H. D. Stover, purchasing agent; T. A. Record, personnel director; H. C. Hickock, general sales manager; A. F. Prior, comptroller.

## Graham Appointed Appliance Buyer for Harbour-Longmire

OKLAHOMA CITY—J. D. Graham has been appointed buyer of the major appliance department at Harbour-Longmire here, replacing J. C. Wathen.

## North Carolina Dealers Sell 1,534 Refrigerators

RALEIGH, N. C.—Electrical appliance dealers in the territory served by the Carolina Power & Light Co. here sold 1,534 refrigerators during October, the utility has reported.

They also sold 1,217 ranges, 203 freezers, 812 water heaters, 44 dishwashers, 353 automatic washers, 2,754 conventional washers, 27 dryers, 96 ironers, and 271 water systems.

## Reg. W Won't Cover Items Pushed over $50 by Tax

WASHINGTON, D. C.—Instalment credit controls will no longer apply on items that are pushed above a $50 cash price by the sales tax, the Federal Reserve Board announced recently. Effective date of the ruling is Jan. 1, 1949.

Heretofore, inclusion of the sales tax had brought listed articles which had a retail price of slightly less than $50 within the scope of Regulation W.

The board said that the action was taken to "reduce operating difficulties in the trade, particularly for merchants serving areas which include some localities with and others without sales taxes."

## Du Pont Ups Ammonia Price 1-Cent Per Lb.

WILMINGTON, Del.—The du Pont company on Dec. 15 announced an increase of one cent a pound in the price of anhydrous ammonia in cylinders for all areas, except the Pacific Coast. The rise, it was said, is necessary because of the increases in rail freight rates. Ammonia is shipped to the Pacific Coast by steamship.

The new price in Zone 1 is 17 cents a pound.

### APC Takes on 4 More Lines

NEW YORK CITY — Appliance Production Corp. here has been appointed New York metropolitan distributor for "Lockrator" refrigerators, Taylor Junior washers, General "Low-Boy" refrigerators, and Orley freezers, it was announced by Malcolm B. Hendelman, of APC.

## Greater Traffic Seen Big Advantage of Supermarket Self-Serve Meat Department

CORONADO BEACH, Calif.—A nationwide increase in self-service meat departments of 38% in the last two months and more than 100% in the last year was reported to the annual mid-year conference of the Super Market Institute, held here recently.

Institute members, polled by William Applebaum of Stop & Shop, Inc., Boston, revealed that self-service meat departments in their stores had increased almost 400% in the last year.

Operating figures were not so rosy, however. Gross profits with self-service meat are no higher than with service department—and may not even be so high in early stages of the switch over, the Institute heard. However, self-service meat departments often boost volume in other departments.

Discussions on the floor also revealed that supermarket operators are finding their gross profits shrinking with a net profit of approximately 1% in every dollar's worth of groceries being typical.

Even though every indication points to the halt in food prices, which means that food merchants must watch inventories even more closely than ever before, supermarket operators from all parts of the country told of plans to build bigger and better markets in their drive for greater volume to offset mounting operating costs.

The new markets, it was indicated, will include features that were formerly described as "frills" but which have proven their general usefulness as tools of more efficient store management.

In this category were listed terrazo floors, mirrored backwalls, soundproof ceilings, and modern lighting.

It was pointed out that 800 supermarkets were completed throughout the country this year.

In their discussion of self-service meats, members of the Institute noted that although they were not making any greater gross profit through this method of merchandising, consumers are reaping benefits of saved time, higher quality meat, and a broader variety of meat.

Big increases in sales of fish, poultry, and cold cuts were revealed. Poultry sales in some stores were up 500%, fish 300% and cold cuts 200%.

Over-all store sales increase slightly with the addition of self-service meat departments, according to members. But intensive promotion of the department via radio and newspaper has produced (and held) increases of as much as 45% in total meat business.

Generally speaking, self-service meat departments do not change the ratio of meat sales—which are holding at the generally accepted average of 23 to 25% of total business.

Quality of meat sold via self-service tends to run higher than in service counters with "choice" or close to "choice" almost standard in the industry.

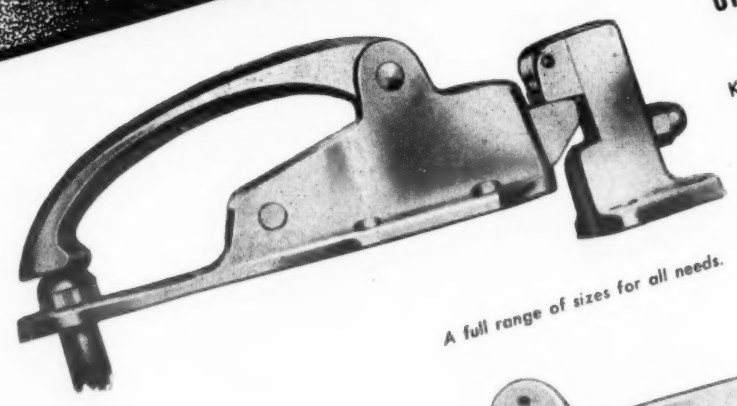
Operational problems in self-service meats continue to make difficulties for operators.

No satisfactory solution to bleaching seems to have been developed, though hope was expressed that good results might come from studies being carried on by the General Electric Co.

No easy solution to wrapping problems has been worked out, according to operators.

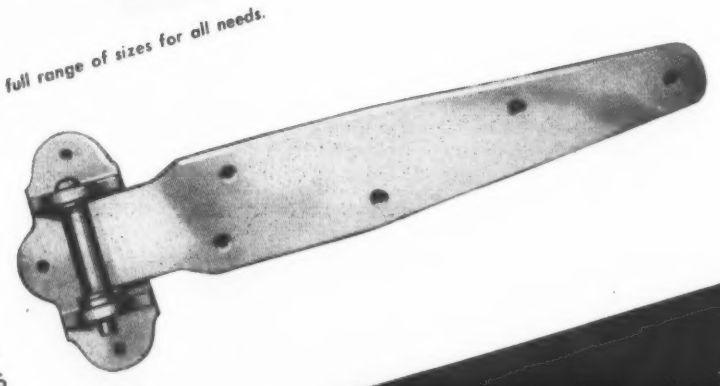
A most favorable attitude towards self-service meats is developing among unions, largely the result of sharply increasing employment to handle tonnage in meats.


A Smooth "open and shut" proposition . . . special for WALK-IN COOLERS



UNIVERSAL LOCK No. Z-326
MALLEABLE IRON
KEEPER ADJUSTABLE ½ TO 2 INCHES
FINISH: CADMIUM
WEIGHT: 10 LBS.

A full range of sizes for all needs.



HINGE No. 1FCS
STEEL BLADE
CAST IRON BUTT
BALL BEARING
FINISH: CADMIUM
WEIGHT: 16¼ LBS. PER PAIR
OTHER SIZES FOR ALL NEEDS

Good hardware — smart in appearance, as efficient and durable as it is good looking.

Write for full specifications

ARCADE MANUFACTURING DIVISION
ROCKWELL MANUFACTURING COMPANY
FREEPORT, ILLINOIS



ALCO

ENGINEERED REFRIGERANT CONTROLS

ALCO VALVE CO. ST. LOUIS

# A Man with a Future

The man who plants his business roots deep, to thrive and grow. That's the Kelvinator dealer.

He knows where he is going, for his future is clearly charted. And it will be free of many hazards . . . because of the retail-minded policy of his Kelvinator Franchise.

Here is the pledge of that Franchise: "*An adequate dealer for every market . . . an adequate market for every dealer.*" And what a world of meaning that pledge has today! For, despite the fact that the Appliance Industry at large has *two to three times* as many dealers in the field as formerly . . . Kelvinator has firmly held to its policy of *fewer, but better dealers.*

That is why the man with a Kelvinator Franchise is a man with a future . . . a future filled with opportunity for solid growth and accomplishment.

TUNE YOUR RADIO TO EDWIN C. HILL and "THE HUMAN SIDE OF THE NEWS" Monday through Friday . . . another retail-minded contribution to the progress of Kelvinator Dealers.

**Kelvinator — of Course!**

**. . . THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY**

KELVINATOR, DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT, MICHIGAN

## Drops Price Cutting Suit Against Monarch-Saphin

NEW YORK CITY—Because appliance price cutting in New York City has become so extensive that nothing can be gained by making an example of one alleged violator of fair-traded prices, according to attorney Gerald I. Nierenberg, Marino Jeantet has decided to drop his suit against the Monarch-Saphin appliance firm.

Jeantet, a Queens dealer, had brought the action against the New York City store, charging that Monarch-Saphin had cut fair-traded prices on Philco products and that by so doing, Monarch-Saphin was hurting his business.

A request for a temporary injunction had been denied by the Queens County Supreme Court. Trial of the case was to come before the court within the next few months.

## *Witham Erects New Store*

BAKERSFIELD, Calif. — A new store building is being erected here for Witham's Appliance Store.

## Minnesota Warning--

*(Concluded from Page 1, Column 2)*

week only, an XYZ radio with each purchase of a living room set,' are in fact subtle and misleading offers to give something in addition to that which is actually purchased and for which money is paid, if shown to have the effect of injuring competitors and destroying competition, are illegal (under Minnesota's unfair practices act)."

The department also warns that "wholesale" direct to consumer promotions are illegal in Minnesota.

" 'Wholesale' to consumer advertisements are becoming an epidemic according to numerous reports received by the trade promotion division," the department declares. "This form of deceptive, misleading and fraudulent advertising is prohibited by Minnesota's unfair practices act.

"Not only does this act outlaw 'wholesale' direct to consumer promotions, but in addition, it prevents employers from selling to their employes, or others, any merchandise not handled by the employer in the regular course of his business."

## *Gibson Plans To Produce 500,000 Appliances*

GREENVILLE, Mich.—Production of 500,000 refrigerators, ranges, and home freezers, with an estimated value of $60 million, is programmed for 1949 by Gibson Refrigerator Co., declares Charles J. Gibson, president. Gibson sales in 1948 are estimated at $50 million.

To meet the increased demand for the company's appliances, a $10 million expansion project is nearing completion at the company's various plants, the president said.

The company's expansion project in Greenville and Belding, Mich., includes new warehouses, new porcelain furnaces, new presses, new insulation processes, and a complete new engineering laboratory of 25,000 square feet. New trackage and shipping facilities will be added.

The field sales force will be increased from eight to 14 men, and a $1 million advertising and sales promotion campaign is being planned, states Gregory V. Drum, advertising manager.


# For The New and Colder Refrigerators!

**INLAND Makes THE NEW and STURDY "Magic Touch" Ice Cube Tray—**

## The "Free-Cube"

The new 1949 electric refrigerators, providing *colder* temperatures, demand rugged service from ice cube trays. Inland meets this demand with the new "Free-Cube" Tray, which has grids made of heavier-gauge metal and a new, simplified operating lever.

The new tapered lever stays clear of the ice, and is instantly accessible to free and lift the grid, leaving the cubes separate, dry and free in the tray. Gentle finger-lift does it all, in one simple operation.

Like all Inland "Magic Touch" Trays, the "Free-Cube" assures users of full convenience—no sticking trays, no splashing water, no melted, wasted cubes. And Inland's better tray design assures faster freezing.

For bigger sales and profits with the new 1949 refrigerators, *insist* that the ones you sell come factory-equipped with Inland Trays. Sell Inland Trays to all your "replacement" customers. And put new Inland "Magic Touch" Trays in all refrigerators you trade in for resale.

## "Magic Touch" Ice Trays by INLAND MANUFACTURING

INLAND MANUFACTURING DIVISION, General Motors Corporation, DAYTON, OHIO


# Latest List of Exhibitors At Midwinter Marts

## *FURNITURE MART*

### REFRIGERATORS

| Name | Space |
|---|---|
| Admiral Corp. | 526-27 |
| Amana Society | 536-B |
| Crosley Div., Avco Mfg. Corp. | 535-36-A |
| Frigidaire Div., General Motors Corp. | 508-09-A |
| General Electric Co. | 538-39-A |
| Gibson Refrigerator Co. | 537-38-B |
| Hotpoint Inc. | 533-34-35-B |
| Ideal Steel Products Co. | 17/Q-116-117 |
| Kalamazoo Stove & Furnace Co. | 17/T |
| Kelvinator Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Leonard Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Marquette Appliances, Inc. | 17/L |
| Monitor Equipment Corp. | 17/78 |
| Norge Div., Borg-Warner Corp. | 521-22 |
| Philco Corp. | 128 |
| Sanitary Refrigerator Co. | 528 |
| Westinghouse Electric Corp. | 501-03 & 542-43-B |

### HOME FREEZERS

| | |
|---|---|
| Admiral Corp. | 526-27 |
| Amana Society | 536-B |
| Ben Hur Mfg. Co. | 528 |
| Crosley Div., Avco Mfg. Corp. | 535-36-A |
| Frigidaire Div., General Motors Corp. | 508-09-A |
| General Electric Co. | 538-39-A |
| Gibson Refrigerator Co. | 537-38-B |
| Kalamazoo Stove & Furnace Co. | 17/T |
| Kelvinator Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Leonard Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Marquette Appliances, Inc. | 17/L |
| Monitor Equipment Corp. | 17/78 |
| Norge Div., Borg-Warner Corp. | 521-22 |
| Philco Corp. | 128 |
| Sanitary Refrigerator Co. | 528 |
| Westinghouse Electric Corp. | 501-03 & 542-43-B |

### WASHING MACHINES

| | |
|---|---|
| Altorfer Bros. Co. | 541-42 |
| Appliance Mfg. Co. | 510-A |
| Automatic Washer Co. | 507-B |
| Barlow & Seelig Mfg. Co. | 530 |
| Barton Corp., The | 549-A |
| Bendix Home Appliances, Inc. | 503 |
| Blackstone Corp. | 544-A |
| Conlon Div., Conlon-Moore Corp. | 504 |
| Crosley Div., Avco Mfg. Corp. | 535-36-A |
| Frigidaire Div., General Motors Corp. | 508-09-A |
| General Electric Co. | 538-39-A |
| Holland Reiger Div., The Apex Electrical Mfg. Co. | 17/98-99 |
| Horton Mfg. Co. | 511-A |
| Hotpoint Inc. | 533-34-35-B |
| Jacobs, Co., F. L. | 17/75-76 |
| Kalamazoo Stove & Furnace Co. | 17/T |
| Landers, Frary & Clark | 17/44-48 |
| Monitor Equipment Corp. | 17/78 |
| Morton Appliance Co. | 631 |
| Nineteen Hundred Corp. | 508-B |
| Norge Div., Borg-Warner Corp. | 521-22 |
| One Minute Washer Co. | 17/102-103 |
| Thor Corp. | 17/90-93 |
| Westinghouse Electric Corp. | 501-03 & 542-43-B |

### DRYERS

| | |
|---|---|
| Bendix Home Appliances, Inc. | 503 |
| Blackstone Corp. | 544-A |
| Conlon Div., Conlon-Moore Corp. | 504 |
| Frigidaire Div., General Motors Corp. | 508-09-A |
| General Electric Co. | 538-39-A |
| Hamilton Mfg. Co. | 17/88-89 |
| Hotpoint Inc. | 533-34-35-B |
| Nineteen Hundred Corp. | 508-B |
| Westinghouse Electric Corp. | 501-03 & 542-43-B |

### DISHWASHERS

| | |
|---|---|
| Champion Dishwashing Machine Co. | 2453 |
| General Electric Co. | 538-39-A |
| Thor Corp. | 17/90-93 |
| Westinghouse Electric Corp. | 501-03 & 542-43-B |

### RANGES

| | |
|---|---|
| Admiral Corp. | 526-27 |
| Crosley Div., Avco Mfg. Corp. | 535-36-A |
| Detroit Vapor Stove Div. Borg-Warner Corp. | 17/R-118-119 |
| Estate-Heatrola Div., Noma Electric Corp. | 523 |
| Frigidaire Div., General Motors Corp. | 508-09-A |
| General Electric Co. | 538-39-A |
| Gibson Refrigerator Co. | 537-38-B |
| Hotpoint Inc. | 533-34-35-B |
| Kalamazoo Stove & Furnace Co. | 17/T |
| Kelvinator Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Landers, Frary & Clark | 17/44-48 |
| Leonard Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Lindemann & Hoverson Co., A. J. | 17/42-43 |
| Monitor Equipment Corp. | 17/78 |
| Moore Div., Conlon-Moore Corp. | 504 |
| Norge Div., Borg-Warner Corp. | 521-22 |
| Roberts & Mander Corp. | 546-D |
| Stevens & Associates, George T. | 447-48 |
| Tappan Stove Co. | 540-40-B |
| Westinghouse Electric Corp. | 501-03 & 542-43-B |

### WATER HEATERS

| | |
|---|---|
| Allen Mfg. Co., Inc. | 510-B |
| Coleman Co., Inc., The | 525 |
| Duo-Therm Div., Motor Wheel Corp. | 517 |
| Evans Products Co. | 541-B |
| Frigidaire Div., General Motors Corp. | 508-09-A |
| General Electric Co. | 538-39-A |
| Gray & Dudley Co. | 515-B |
| Hedges Mfg. Co., Inc., M. M. | 17/80 |
| Hotpoint Inc. | 533-34-35-B |
| Kelvinator Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Landers, Frary & Clark | 17/44-48 |
| Leonard Div., Nash-Kelvinator Corp. | 513-14-15-A |
| Lindemann & Hoverson Co., A. J. | 17/42-43 |
| Lonergan Mfg. Co. | 514-B |
| McGraw Electric Co., Clark Div. | 511-B |
| Monitor Equipment Corp. | 17/78 |
| Norge Div., Borg-Warner Corp. | 521-22 |
| Quaker Mfg. Co. | 516-B |
| Queen Stove Works, Inc. | 17/77 |
| Stevens & Associates, George T. | 447-48 |
| Westinghouse Electric Corp. | 501-03 & 542-43-B |

## *MERCHANDISE MART*

| Name | Space |
|---|---|
| American Central Div., Avco Mfg. Co. | 1476 |
| Apex Rotarex Corp. | 1472 |
| Berger Co., Inc., T. W. | 1454 |
| Bersted Mfg. Co. | 1467 |
| Carrier Corp. | 1186 |
| Casco Products Corp. | 1175 |
| Dearborn Stove Co. | 1490 |
| Deepfreeze Div., Motor Products Corp. | 1447 |
| Dexter Co. | 14-103 |
| Dominion Electric Mfg. Co. | 1422 |
| Easy Washing Machine Co. | 1464 |
| Eldredge Sewing Machine Co. | 1468 |
| Elgin Steel Kitchens | 1454 |
| Estate Heatrola Div., Noma Electric Corp. | 1418 |
| Eureka Div., Eureka Williams Corp. | 1161 |
| Everedy Co. | 11-112 |
| Farber, Inc., S. W. | 1419A |
| Florence Stove Co. | 1459 |
| Frigid Freeze Corp. of America | 1418 |
| Free Sewing Machine Co. | 1450 |
| General Electric Co. | 1127 |
| General Mills, Inc., Home Appl. Dept. | 1453A |
| Hilton Clock Co. | 1553 |
| Hotpoint, Inc. | 1457 |
| Johnson & Son, Inc., S. C. | 1158 |
| Jordon Refrigerator Co. | 14-101 |
| Kaiser-Fleetwings Sales Corp. | 1174 |
| Knapp-Monarch Co. | 1483 |
| Landers, Frary & Clark | 1479 |
| LaSalle Lighting Prod., Inc., Heater Div. | 1492 |
| Launder, Ray S. | 1433A |
| Manning Bowman & Co. | 1466 |
| Martin Co. | 14-104 |
| McCreedy Cabinets, Inc. | 14-101 |
| Metal Ware Corp. | 1411A |
| Mullins Mfg. Corp. | 1119 |
| Mutschler Bros. Co. | 1125 |
| National Electric Washer Co. | 14-101 |
| National Enameling & Stamping Co., Electric Div. | 1422 |
| National Sewing Machine Co. | 1468 |
| New Home Sewing Machine Co. | 1450 |
| Noma Electric Corp. | 1418 |
| Nutone, Inc. | 1451 |
| Peerless Mfg. Co. | 1485 |
| Perfection Stove Co. | 1474 |
| Premier Vacuum Cleaner Div., General Electric Co. | 1160 |
| Proctor Electric Co. | 1473 |
| Refrigeration Corp. of America | 1418 |
| Revere Clock Co. | 1422 |
| Rittenhouse Co. | 14-104 |
| Rival Mfg. Co. | 1454A |
| Royal American Corp. | 1583 |
| Rutenber Electric Co. | 14-107 |
| Samson-United Corp. | 14-104 |
| Sanford & Co., D. E. | 1405 |
| Schaefer, Inc. | 1188 |
| Sessions Clock Co., Inc. | 1409 |
| Silex Co. | 14-109 |
| Smith Mfg. Co., F. A. | 1422 |
| Son-Chief Electrics, Inc. | 1414 |
| Spartan Co. | 1163 |
| Sperti, Inc. | 1422 |
| Steel Products Mfg. Co. | 1498 |
| Sunroc Co. | 1177 |
| Superior Electric Products Corp. | 11-116 |
| Swartzbaugh Mfg. Co. | 1498 |
| Taylor Corp. | 14-101 |
| Taylor Instruments Co. | 11-106 |
| Telechron, Inc. | 1440 |
| Toastmaster Products Div., McGraw Electric Co. | 1455 |
| Utilex Corp. | 1420 |
| Varick Electric Mfg. Co., Inc. | 11-116 |
| Wagner Mfg. Co. | 1491 |
| Waring Products Corp. | 1405 |
| Washburn Co. | 1123A |
| Wiley Organization, Inc., Joseph H. | 14-101 |

EVERY COMMERCIAL REFRIGERATION DISTRIBUTOR NOT AT PRESENT USING COMMERCIAL CREDIT PLAN FINANCING SERVICE IS URGED TO INVESTIGATE ITS ADVANTAGES NOW. ELIGIBLE INSTALLATIONS INCLUDE: ROOM COOLERS; BEER DISPENSING EQUIPMENT; REACH-IN CABINETS; WALK-IN CABINETS; ICE CREAM CABINETS; FROZEN FOOD CABINETS; DISPLAY CASES; MILK COOLERS; FARM FREEZERS; AIR CONDITIONING EQUIPMENT; BEVERAGE COOLERS AND OTHER ALLIED AND MISCELLANEOUS COMMERCIAL REFRIGERATION PRODUCTS. FOR INFORMATION, APPLICATION AND SALES FORMS WRITE ANY COMMERCIAL CREDIT OFFICE.

# COMMERCIAL CREDIT CORPORATION

*A Subsidiary of Commercial Credit Company, Baltimore*

MORE THAN 300 OFFICES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

# INSIDE DOPE

*by GEORGE F. TAUBENECK*

*(Concluded from Page 1, Column 1)*

ings, count them one by one." But we don't do that, we Americans. What we have, we don't appreciate. The very nature of life in America encourages us to covet, to want more, to be unhappy and dissatisfied.

Elsewhere, to covet is hopeless.

Political dictators in feudal-type states—such as India, Russia, and China—seem to understand this phenomenon. They keep the masses quiet by holding them down to a bare subsistence level. In those countries, people never get a chance to feel sorry for themselves. They're so busy trying to cadge or glean today's inadequate food that they haven't the energy to complain or criticize or revolt.

This centuries-old formula for maintaining the *status quo* makes the wealthy and privileged richer and more powerful, grinds down millions of peasants and peons into shocking penury and misery, and prevents material progress.

In the United States, we have promoted a radically different principle, to wit: If *everyone* gets a chance to do and have more, those at the top may become well-to-do, and their loyal assistants and helpers will live well, too. This principle has worked out beautifully in practice.

## *To Envy Is Human*

Trouble is, now that Americans *have more,* they want more, and see no reason why those "at the top" should have more than they do. Communist idea-planters have encouraged this dissatisfaction. They have propagandized false assumptions, such as this patent and potent lie:

"More than half the income of corporations is taken by stockholders and managers." Fact is, stockholders get less than 3% of American corporate earnings, and managers are paid less than half of 1% of the total grosses. (We can cite endless statistics to prove this point—in the prosperous year of 1945, for example, the mighty Swift & Co. retained only nine-tenths of one percent of all the money it received for its meats.)

During the last two decades, employes of American corporations have been paid—in all American business enterprises—approximately 85 cents out of every dollar received by those businesses.

But most American voters don't realize that this unequal division of earnings takes place. Competent public opinion polls reveal the fact that "the man in the street" thinks:

(1) That corporations, investors, and managers get from 50 to 75% of every dollar, while working men and women get the small remainder;

(2) Business firms should be satisfied with a 10 to 15% return on their investments.

Hell's bells! If the managers of business enterprises could be sure of earning *half* that figure—5% to 7%—most investors and executives would think that the millenium had arrived.

## *Potentates Gripe, Too*

This crabbing and beefing and fighting over the "more" that everybody wants is not confined to the uninformed, jealous "common man," however. Lots of big-money earners are unhappy and restless, also.

They gripe about taxes (and with reason, too). They contrast their opportunities with those enjoyed by idea-men and hard workers in the nineteenth century and in the first decade or two of the twentieth. (In those days, fortunes could be made in a lifetime. Orphan boys, through diligence and perseverance and ingenuity, could ride the high seas in yachts, and own villas on the Riviera. The income tax, and corporation taxes, hadn't been invented in those glorious days. Earnings could accumulate, and be re-invested at high interest rates.)

No matter how well off you are, you wish you could do better. And the higher in the economic scale your rise, the more your imagination runs riot as to what you could do if only you had more money.

That's one of the major reasons why continuing strife and confusion and petty bickering persist in well-off America. The more you eat, the more you want. The more you have, the more you think you need.

Maybe it's time we Americans began counting our many blessings. We all eat more and live better than anybody else does, or ever has. So:

Let's quit acting like cry-babies.

Here's why we should thank our Lucky Stars:

In 1900 there were only 6,000,000 savings bank depositors in the United States. In 1946 there were more than 50,000,000 depositors, or an average of one and one-fourth savings account to every family in the nation. In 1900 the total amount of savings bank deposits was $2,440,000,000. By 1946 the total savings deposits of the nation were more than $50,000,000,000.

Back in 1900, there were 15,395,000 life insurance policies of all kinds in force, for a total of $8,562,000,000. In 1944 American citizens owned 147,000,000 policies, which were worth a grand total of $149,071,000,000.

The average compensation paid to 6,000,000 employes of American manufacturing industries in 1900 was $381 per employe. In 1946, the average annual wage paid to 14,000,000 employes in manufacturing was $2,400 per employe.

Of course it's true that a dollar wouldn't buy as much in 1946 as it did in 1900. According to the Federal Reserve Bank of New York, living costs are about two and one-half times as high now as they were at the turn of the century. On the other hand, the average annual earnings of business employes in 1946 were more than *six* times greater than in 1900.

In 1899 the average wage on the American farm was $14 per month, plus room and board. By July 1, 1946, the average American farm "hand" was paid $84 per month "and board." Today's farm "hands" are paid more for a week's work than their predecessors received in a month. Thus, while the cost of living on farms was going up two and one-half times, farm wages were increased sixfold.

In 1900 there were 7,200,000 owner-occupied homes in the United States. In 1945 more than 20,000,000 homes were owner-occupied. In other words, 53.2% of all the families in the United States were living in homes they owned. (These figures are taken from reports of the United States Bureau of Census.)

In 1936, all "big shots" who were paid $100,000 or more received a total of $974,000,000 out of a national income of $65,000,000,000. They got about 1½% of that total income, *before* they paid their Federal income taxes. *After* paying their taxes these "big shots" could keep $483,000,000, or about ¾ of 1% of the total national income.

For the next seven years (1936 to 1942 inclusive) individuals paid more than $100,000 a year, before taxes, had a combined total income amounting to about 1% of the national income. More than three-fourths of these payments were absorbed by taxes, however, so that these top-earners were left with less than ½ of 1%, or 1/200th part, of the income of all individuals in the United States.

Does that seem like a lot to pay for brains and spark-plug talent?

## *Too Many Dealers?*

Two years ago soothsayers were shaking their heads over the army of business venturers who were then crowding into the appliance retailing field. "They won't last long," moaned the double-domes. And some of them haven't.

Nevertheless, many of these new ventures are still in existence. How come? Here's one explanation:

The cost of doing business has never been so low—strange as it may seem.

Dollar volume, though not necessarily unit volume, is at unprecedented heights. Customers are still crowding around the store-entrance of the appliance dealer who has merchandise to sell.

So Mr. New Appliance Dealer has not needed heavy advertising and promotion budgets. Nor has he had to hire "cold canvassing" salesmen to dig up prospects by the thumb with the time-tested doorbell technique.

Trade-ins, the source of many a loss during the thirties, are no problem today for the appliance dealer. If a retailer accepts trade-ins at all (it is no hard task to convince the customer that he can get more for his used appliance by selling it himself than he can by turning it in) he can find plenty of eager buyers for these second-hand items if he advertises them.

Credit losses and repossessions still are practically unheard of in the appliance business. Despite the shrunken financial resources of many lower income customers, the appliance dealer can sell almost all the units he is allocated on good, sound credit terms to families who *need* and *can pay for* his products.

Most of his customers are able to plunk cash on the barrelhead for their purchases.

Inventory losses, too, have been infinitesimal, because prices are still rising.

Compared with the prewar dealer, today's entrepreneur is doing business at an extraordinary low cost.

Despite all these favorable factors, however, many recently-franchised dealers are in trouble. A closer scrutiny of some weaker appliance franchises will reveal difficulties that are not apparent from the street. For example: The same firm name may be painted on the front window, but the faces behind the name have changed. The gent who first opened the doors may no longer be on the premises. He might have found the run-around game of priority lists, allocations, and scarce merchandise too much for his acumen, resiliency, and patience.

Or, after his own funds have been exhausted, he may have lured fresh capital into the firm in the form of a new partner, or partners.

Whatever the form of this change, these alterations represent a failure of the original management to make a go of it. In sterner times, these marginal businesses would have folded. Today, they are "consolidated."

Under present conditions, many lately-enfranchised appliance dealers have managed to survive. Their presence lends a rosy, if somewhat false, hue to the appliance retailing picture.


There's * 40% PROFIT FOR YOU in HARDWARE REPLACEMENT

*PLUS YOUR REGULAR TIME AND SERVICE CHARGE

For a complete, satisfactory service job, ***check the hardware*** as well as the compressor. The new Grand Rapids Brass price list guarantees you 40% on replacement hardware sales, plus regular service charges. You'll make your commercial customers happy too, — because new hardware can bring new efficiency, new good looks, new operating economy to their old display cabinets, back bars, and coolers.

**Earn up to $24.64 on new hardware for this cabinet**

A single cabinet like this runs into real money for you! Let's figure your hardware replacement profits on this one job. There are hundreds of opportunities like this in your community!

| Hardware Needed | Retail Price |
|---|---|
| 8 Locks No. 4722 | $24.00 |
| 8 Strikes No. 3843 | 8.00 |
| 16 Hinges No. 15345 | 29.60 |
| Hardware costs customer | $61.60 |
| Your cost (less 40%) | 36.96 |
| Your PROFIT on Hardware | $24.64 |

*Plus* REGULAR INSTALLATION CHARGE

**PREFERRED for NEW EQUIPMENT . . . PREFERRED FOR REPLACEMENT, TOO**

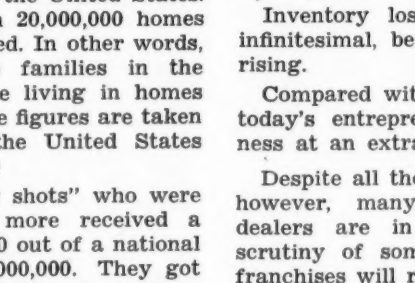
Now you can give your service customers the identical lock preferred by leading makers for their best commercial cabinets. Available in a full range of sizes . . . all providing the exclusive, positive "living action" principle engineered by Grand Rapids Brass for lifetime performance. Equally handsome and sturdy are hinges by Grand Rapids Brass . . . made with self-lubricating Oilite bronze bearings and stainless steel pins. Get them from your jobber . . . he can supply everything you need, from massive walk-in hardware to the smaller sizes. Demand and get the genuine.

**FREE — Ask Your Jobber**

This manual tells how to sell and install replacement hardware. Full directions and detail drawings. If your jobber can't supply, write direct and give us his name.

Grand Rapids Brass Company
Division of CRAMPTON MANUFACTURING COMPANY
Grand Rapids 4, Michigan





*An Old Favorite Back Again!*

**OLYMPIAN BOTTLE COOLERS**
by Perlick for
**IMMEDIATE DELIVERY**

Perlick "Olympian" Bottle Coolers, in standard baked black or the new all stainless steel are now available for prompt shipment in 4 popular sizes. Now vastly improved for maximum bottle cooling performance. Write for Bulletin No. 56.

Also Ice Refrigerated Models

PERLICK BRASS CO.
3110 W. MEINECKE AVE.
MILWAUKEE 10, WIS.

## Front Servicing Possible On G-E Pushbutton Range; Most Parts To Be Replaced

BRIDGEPORT, Conn. — Complete servicing from the front is possible on the new General Electric pushbutton range, the company declared here recently.

The back control panel tilts forward allowing the serviceman ready access to all wires and units there at waist high level. In addition, all other wires and units, such as oven unit wiring and oven light sockets, are removable from the front and do not require that the range be moved from the wall.

To get at the back control panel, the serviceman raises the right front surface unit and reaches two handles at the base of the control panel. Squeezing the two handles together releases the locking bar pins so that the panel may be tilted forward.

No current runs through the wires when the control panel is tilted forward because a switch automatically cuts off all power to the range. Stop positions on the side hinges prevent the control panel from tilting too far and scratching the enamel of the range surface.

Servicing the G-E range has been planned as a replacement, not a repair operation, the company said. All components can be replaced as individual units, which means less time spent on service calls and more convenience to the owner.

The fluorescent lamp and the Tel-a-Cook pilot lights in the control panel can be replaced by the owner himself, it is said.

## Store Front Offers Complete Visibility

JACKSON, Miss.—Complete visibility of appliance displays and effective lighting are features of the new Pollard Appliance Co., Inc. store at 225 E. Pearl St. here.

The 50 ft. front of the building is plate glass from ceiling to display floor level. Even the doors are of solid glass. Indirect lighting is used just inside the glass and is directed on the line of smaller appliances at night.

The showroom, which is devoted half to C. V. Hill & Co. refrigerated commercial equipment and half to Bendix and Norge appliances, is 70 ft. deep. Walls and ceiling are done in three pastel shades to give varying backgrounds to the appliances.

To the rear of the building, a repair shop and reserve stock department occupy an additional 40-ft. depth. Behind the building is a parking lot capable of holding cars for all customers who might patronize the store at one time, according to the store management.

## $250,000 Blaze Destroys Frisbie Co., Appliance Mfr.

LOS ANGELES — With an estimated loss of $250,000, the H. C. Frisbie Co. here, electrical appliance manufacturing plant, was destroyed by fire on Dec. 1. Cause of the blaze was not immediately determined.

for SULFUR DIOXIDE and METHYL CHLORIDE

See Your ANSUL WHOLESALER

These Ansul Refrigerants have a long record for DRYNESS, PURITY and DEPENDABILITY. You will like Ansul's friendly service.

'REG. U.S. PAT. OFF.

ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION
MARINETTE, WISCONSIN
DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22," "FREON-113" AND "FREON-114"

## NARDA Cites Dealers' Major Problems On Eve of Its Annual Meeting In Chicago

CHICAGO—Thirteen problems of greatest concern to appliance and radio dealers were enumerated by Clifford C. Simpson, managing director of the National Appliance & Radio Dealers Association (formerly NERA), following his attendance at NARDA meetings in various parts of the United States.

He said the problems are:

Franchise improvements, service responsibilities, goods damaged in shipment, inferior workmanship, malpractice among dealers, improved dealer sales promotion, shrinking profits, increasing operating costs, low dealer discount structure, maldistribution of some products, price stabilization, continued tie-in selling by distributors, and sale of advertising aids out of proportion to limited delivery on some products.

"Dealers everywhere are becoming very cognizant of the real and genuine problems facing them in the months and years to come," Simpson reported in a recent issue of NARDA's weekly news letter. "There is a definite awareness that unless these problems are solved there just won't be much net profit.

"Too, they are fully aware of the many problems faced by manufacturers in making superior goods and getting them shipped to dealers without transportation damage.

"Just how far can the dealer go in servicing current models? Isn't there a definite need for a clear cut understanding as to the responsibility in such service on the part of the manufacturer, the distributor, and the dealer? The dealer can't possibly continue to stand all the labor costs involved in servicing factory defect merchandise."

Noting that "this is a problem for the whole industry," Simpson indicated that it would be given a great deal of attention at NARDA's annual meeting to be held in Chicago Jan. 9-11.

## Trade-In Promotion Features List Price Minus Allowance

CINCINNATI—A stepped-up, all-out, trade-in sales promotion is under way at May-Stern's here. The store is using the ingenious device of quoting the regular price and the sale price, which represents the deductions made for trade-ins.

It works this way: Up to $60 trade-in allowance is made on old refrigerators "when you buy any of these nationally advertised models—Westinghouse, Norge, Leonard, Crosley, Philco, or Hotpoint, in any size from 6 to 11 cubic feet capacity. Regular prices, $209.95 to $399.95, less trade-in allowance for old refrigerator up to $60," May-Stern's explains.

An example on gas ranges is: "Regular $109.95 modern white porcelain range with large insulated oven, a big utility storage drawer, in addition to clean-burning top burners; with your old range, you pay only $97.00."

## Independent Dealers' Appliance Sales Off 9%

WASHINGTON, D. C. — Dollar sales by independent household appliance dealers during October dropped 9% below October, 1947, the U. S. Department of Commerce has reported.

Sales for the month were 10% below September, according to the government survey.

However, the survey showed sales for the 10 months through October were 7% ahead of sales for the same period last year.

Biggest gains among independent stores for the month as compared with the same month last year were among dairy product stores with a 12% rise.

## Lawandus Firm Files Name

BUFFALO—A business name has been filed in the Erie County office for Lawandus Appliance Co., 482 Abbott Rd., Buffalo, by Martin J. Lawandus and James M. Bradford.

If the customer is in a hard-to-please mood...

POINT TO THE DU PONT SEAL

It identifies America's leading home appliance finish!

The "Dulux" seal's a sure-fire clincher for your quality-finishes story. You'll find an increasing number of prospects who have learned to have complete confidence in the name "Du Pont Dulux." From past experience, they know the seal promises a superlative appliance finish that gives *years* of service . . . rigidly pretested for color retention, washability, and mar-resistance. So use the seal to close the deal!

If your manufacturer supplies you "Dulux"-finished appliances *without* the seal, ask him to include it hereafter. It helps your prospect make up her mind . . . means more sales for you!

**Here's selling made easier!** FREE new informative booklet gives you profitable "selling points" for appliances finished with DULUX. Send coupon today for your copy!

DU PONT DULUX
REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Division, Dept. AC-812
Wilmington 98, Delaware

Please send, free of charge, your new illustrated booklet "Inside Information on the Outside."

Name_____ Title_____
Firm_____
Address_____
City_____ State_____

# Sidewalk Display Helps Patron Get Facts Without Fear of 'High Pressure' Tactics

PORTLAND, Me.—A simple merchandising idea for increasing the sale of major appliances is "putting them out on the sidewalk," according to Hilman Williams, Westinghouse dealer here.

Two years ago Williams built one of Portland's most attractive appliance showrooms, with six 8-ft. by 8-ft. display windows along a 90-ft. frontage, each backed up with bright pastel walls, powerful incandescent spotlights, and devoted independently to a different type of appliance.

With a traffic light immediately in front of the store, large numbers of motorists halted during the day, to look at the appliance display inside.

Even with his brilliantly-lighted showroom convenient to the street, Williams felt he wasn't doing enough.

"There are a lot of people who will wistfully admire a modern appliance display, but will not take the trouble to get out of their cars, and come in, for fear they will be immediately approached by a high-pressure salesman," the dealer said.

"Therefore, to encourage people to stop, get out of a car, and look over displays, we hit upon the idea of showing a representative stock out on the sidewalk, in the brick spaces between our windows."

Whenever the weather is mild, the front of the Williams' store invariably shows half a dozen appliances, which may include refrigerator, home freezer, automatic laundry, and water heaters.

Instructions to salespeople are to let customers do all of the looking they wish, without bothering them—on the theory that the customer who becomes genuinely interested will come on in anyhow.

To each appliance shown both on the sidewalk and in the showroom, Williams attaches a "selling card" which gives full details about the appliance, its retail price, and payment amounts for one year, or a year and a half.

From this, the motorist-housewife can learn all she needs to know about what it will cost her to have the appliance installed in her home. Thus encouraged, many go right into the showrooms and order the appliance at once.

"Making it easy for them will always benefit sales," Williams concluded.

## *Alhart's Open House Celebration Marks Dealer's 12th Anniversary*

ROCHESTER, N. Y. — Alhart's Electrical Co., Inc., here, one of the city's largest appliance dealers, marked its 12th anniversary with an open house celebration at which coffee and doughnuts and gifts were given to all visitors.

Special merchandise events tied in with the celebration included a three-day offer of a free installation on range purchases, special demonstrations of various appliances, and a series of two-for-one appliance offers.

## INACCURACIES IN CUBAN DATA NEED CORRECTION

Servicio General De Refrigeracion
Sales Division
Alvarez, Riumbau y Cia S. en C
Havana, Cuba

Editor:

We have read with pleasure the article concerning Cuba (by Mr. Eugene Hesz, International Market Analyst), which was published on page 18 of the NEWS, Oct. 18, 1948 issue.

There is some incorrect data appearing in this article, which we would like to clarify herein below, namely:

1. The highest temperature recorded by one of our most important observatories, heretofore through present century, has been 95° F., and this only occurred on three different occasions. In general, it can be safely stated that the temperature never exceeds 90° F. The air conditioning calculations are based on 88° or 89° F. outside temperature in Havana. At 9 p.m. during our summer season the temperature is about 80° F.

2. According to our last census in 1943, the population of Cuba is 4,778,583 inhabitants, of which 74.4% are white. We presume that the error was originated by misplacing a decimal point, that is, the article should read 75% instead of 7.5%.

3. The number of registered automobiles in circulation amounts to 80,000 including trucks and buses.

4. Although much remains to be done in the Cuban territory, as far as refrigeration is concerned, some important advance has been noticed during the past few years. Just to give you an idea of this improvement we might as well mention the fact that Cuba imported 4,800 condensing units from the United States in 1947, ⅛ to 3 hp. inclusively, and a total of 2,238 condensing units of same capacities during the first five months of this year.

With reference to the statement that the fresh fish is generally confined to costal areas, this is an erroneous belief, as taking into consideration that Cuba, being a long and narrow island (124 miles widest part and 24 miles narrowest part), where the farthest point from the seashore is located at a distance of 60 miles, it can be readily understood that by means of ice, the fresh fish is carried to any inland place.

Will you be kind enough to publish these corrections, for the sake of truth, with Mr. E. Hesz's approval, as author of the article? We shall sincerely appreciate it.

N. J. BETANCOURT
Chief Engineer

## BUSINESS LEADERS MUST DEMONSTRATE IDEALISM

Monroeville, Indiana

Editor:

Congratulations on your wonderful idealistic discourse on the advantages of our economic order as put forth in your column in the Oct. 25th issue.

You sure know how to express yourself.

Do you want to really become popular with your small fry constituency?

If so, turn your oratory loose on those supposedly savagely independent individuals who run the business show and insist that they cut loose from their soft, functional jobs on the payroll of large corporations and go out and show the world what they can really do. They are all nicely holed up and sitting back and watching the parade go by.

I admire you for your idealism but it is too far from the real facts.

J. K. MARQUARDT

## SLIDE FILMS READY TO AID FREEZER SELLING

The Coolerator Co.
Duluth, Minn.

Editor:

In your issue of Dec. 6 Mr. Eldon Shires of the Oregon Equipment Co. in Klamath Falls, Ore., exposes one of the most heartening attitudes on the part of the retailer that I've seen in a long time, when he asks for visual aids to help sell freezers.

To be specific, Mr. Shires wants a slide film that will not only dramatize the advantages of home freezing from the point of view of the user, but will also dramatize the dollars and cents reasons why every family should have a freezer.

By a strange coincidence the Coolerator Co. has produced a 35 mm. slide film titled "Revolution in the Kitchen" that does the job that Mr. Shires asks for, and we are today sending a copy with our compliments.

At our recent national distributor meeting in Chicago Coolerator previewed a sound slide film in full color titled "A Holiday for Home Makers" which was produced with the council and assistance of *Better Homes & Garden* magazine, and which will be available for dealer use Jan. 1.

We'll make arrangements to preview this picture for Mr. Shires, and for any other interested dealer if they'll just drop us a line. If we can find more dealers with Mr. Shires attitude, the industry will not have to worry too much.

WILLIAM A. MACDONOUGH
Advertising & Sales
Promotion Manager

## LA SALVIA CLARIFIES COMPLICATED MATERIAL

Westinghouse Electric Corp.
Sturtevant Division
20 N. Wacker Drive
Chicago, Ill.

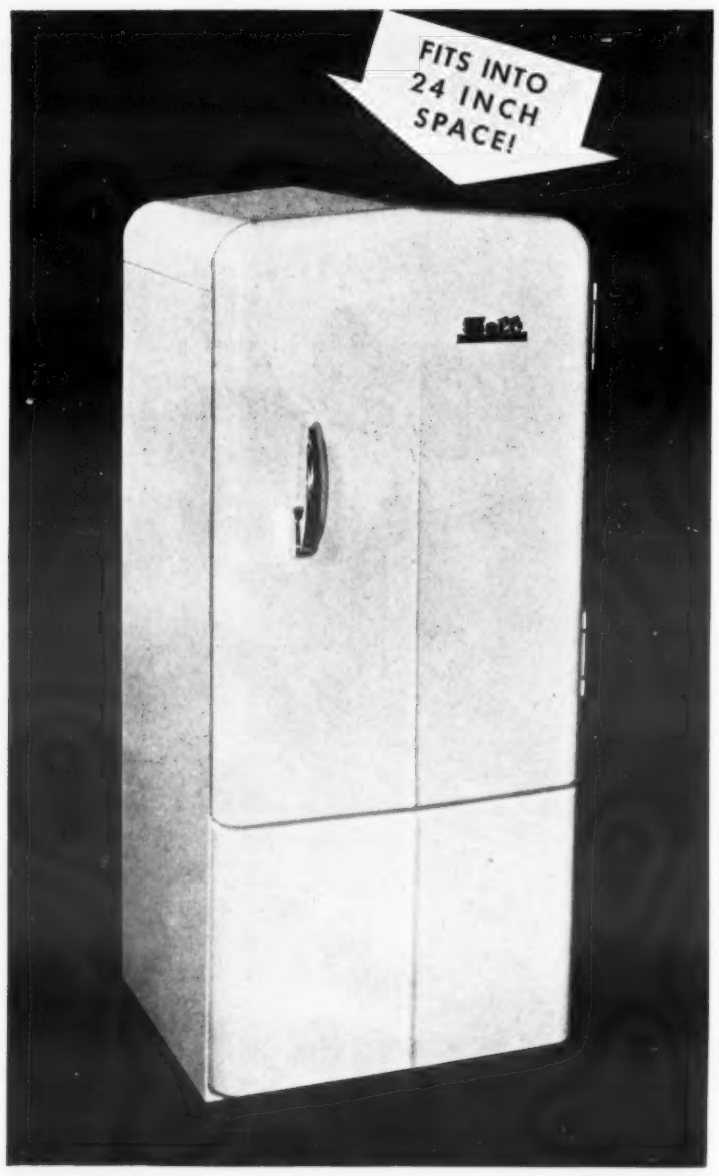
Dear Mr. LaSalvia:

With reference to your articles in the AIR CONDITIONING & REFRIGERATION NEWS, I would like to find out whether you have incorporated these articles in a book or whether you are contemplating doing so since I would certainly like to secure a copy of that book if such is available.

I certainly want to congratulate you on your excellent presentation of the material which makes is possible to understand even the most complicated systems that you described.

LEE C. GATEWOOD, JR.,


# OUR 4 CU. FOOT HERMETIC REFRIGERATOR IS NOW READY FOR YOU!




**Featuring**

- DUPONT DULUX FINISH
- BONDERIZED THRUOUT
- PHENOLIC BREAKER STRIPS
- ALL METAL CONSTRUCTION
- STAINLESS STEEL AND BRASS SCREWS
- HEAVY DUTY EVAPORATOR

**5 YEAR WARRANTY**

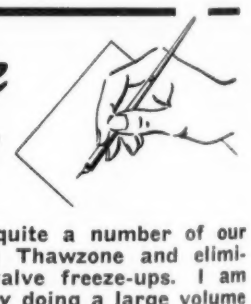
Written Warranty Inclosed with Each Refrigerator

Write Dept. E for marketing details and full information.

Selk MANUFACTURING COMPANY • 1541 SALZMAN ST. • ST. LOUIS 20, MISSOURI



*Men like you wrote this advertisement*



"USING NOTHING BUT THAWZONE"

"We learned that quite a number of our dealers were using Thawzone and eliminating expansion valve freeze-ups. I am now with a company doing a large volume of commercial refrigeration business, probably 75 per cent of which is low temperature installations. We are using nothing but Thawzone in all our applications. . . . Richard Markley, Jr., Hodge's, Liberty, N. Y."

"USED FOR THE PAST EIGHT YEARS"

"We have been using Thawzone for the past eight years in almost all of our low temperature systems and many of our medium temperature jobs. We have always found it to eliminate all moisture troubles on the first application. We have never found any deteriorating effect from the use of Thawzone. . . . John H. Mayer, Mayer Refrigerating Engineers, Rutherford, N. J."

"USES THAWZONE ON ALL NEW JOBS"

"Every new job has Thawzone directly applied into the receiver and strainer, as I have yet to see any such equipment in which every piece is absolutely dry. On service jobs we inject Thawzone into both the strainer and crankcase. I have never had any adverse conditions arise in any system from the use of Thawzone. . . . Harry H. Spear, Refrigeration Service Engineer, Danville, Ill."

*Your refrigeration wholesaler has it*

THAWZONE* PATENTED The PIONEER FLUID DEHYDRANT

HIGHSIDE CHEMICALS CO.
195 VERONA AVE., NEWARK 4, N. J.

ALSO MAKERS OF TRACER* REFRIGERANT LEAK DETECTOR

*TRADE MARK REG. U. S. PAT. OFF.

# Ed Smith Shows Color Film on Silver Alloy Brazing Before Detroit Service Engineers

DETROIT—Jack Barager of Johnston Refrigeration Construction was elected first president of the revived Greater Detroit chapter of the Refrigeration Service Engineers Society at the group's December meeting here recently.

Barager and all the other officers elected were active in the organization of the chapter and were instrumental in raising the membership from 20 to 80 servicemen during the four months in which the chapter has been in existence, it was pointed out.

Other unanimously elected officers were Jack Lindsay of Ace Refrigeration, first vice president; Alex Wilson of Mercier & Spaulding, second vice president and treasurer; Earl Jennings of Temprite Products Co., secretary; and Elmer Pugh of Advance Mfg. Co., historian and sergeant-at-arms.

Charles Earl of Alpha Electric was elected chairman of the educational committee, and W. J. Casey of James & Roach was chosen chairman of the membership committee.

Ed Kellie of Aminco Refrigeration Products Co., retiring temporary president of the group, appointed Merle J. Watson of Johnston Refrigeration Construction and M. J. Schwann of James & Roach as members of the board of directors. Kellie will be the third director, it is reported.

Prior to the election, the group witnessed a color movie on the "Fundamentals of Silver Alloy Brazing" presented by Ed Smith, Michigan representative for Handy & Harman, maker of the Easy-Flo and Sil-Fos silver alloys.

The film emphasized six fundamental steps in producing sound, ductile, and strong silver brazed joints. These steps are the following:

1. Good fit and proper clearance.
2. Clean metal.
3. Proper fluxing.
4. Assembly and supporting.
5. Heating and flowing the alloy.
6. Final cleaning.

Proper tolerances were listed as a space between joint members of from .0015 to .003 in.

Smith, in discussing silver alloy brazing and answering questions from the floor after the film was shown, recommended the use of an oxygen-acetylene torch with a flame of 6,000° F. for good brazing.

However, in reply to questions from the floor, on the problem of having only an acetylene torch in the field, he admitted that silver brazing can and is being done with an acetylene torch but that it is not recommended.

He explained that for good joints the shorter time that heat is applied to the tubing, the less chance there is for oxidation to take place. Oxidation prevents solid bonding of the two pieces of metal because silver alloy will not flow on an unclean surface. An acetylene torch, he said, does not have enough "oomph" to do the job quickly.

It might work on nine out of 10 jobs, he declared, but on that tenth one it could run into a costly and difficult repair job.

He asserted, however, that as far as he knew, the small hand gas-air and gas-oxygen torches do a good job.

On refrigeration equipment, he noted that there is a particular problem in fluxing. In ordinary joints, the tube end can be fluxed entirely before inserting it into the joint. But with refrigeration equipment, it is undesirable to get flux contamination inside the line.

Therefore, he recommended, the tube should first be inserted about two thirds of the way into the joint, then fluxed and pushed in the rest of the way. This, he said, assures a solid bond and still keeps any of the flux from getting into the line.

## *Barbara Kowitz Named Home Economist at Tyler*

NILES, Mich. — Appointment of Miss Barbara Kowitz as home economist for the Tyler Fixture Corp. has been announced by the company.

Barbara Kowitz

Miss Kowitz, who was formerly with Mandel Bros. of Chicago, will have the job of formulating an educational home economics program for the HarderFreez farm and home freezer based on the retail aspect of sales promotion, the company said.

Miss Kowitz will assist with distributor-dealer sales meetings and will work with HarderFreez agents throughout the country, specializing in the processing of foods, packaging techniques, and the convenience factor. She will also be an acting consultant to HarderFreez owners.

## Carrier Northeast Sales Hit $14,500,000 for Yr.

NEW YORK CITY—Direct installations and sales to dealers representing a volume of more than $14,500,000 was completed by Carrier Corp. in the New York, New England and Pennsylvania areas during the 12 months ended Oct. 1, it was reported by O. W. Bynum, Carrier's general sales manager, at a recent sales meeting here.

Bynum said that this constituted a record for the company's northeastern operations, and declared that an almost equal volume of new contracts had been signed in the area during the same 12-month period. He also reported that the sales volume on the company's Conduit Weathermaster system (for large central-station type air conditioning jobs) has increased nearly 50% over last year.

Carrier has order backlogs of from 30 to 45 days on its 3-ton and 5-ton self-contained packaged air conditioners, declared Carl U. Spriggs, assistant general sales manager. Spriggs declared that there is a definite trend away from active and slow seasons in the air conditioning and refrigeration business, pointing out that Carrier's pattern of sales clearly indicates that more and more business organizations are installing equipment throughout the year.

## *N. J. Contractors Install Anthony Dietl as President*

IRVINGTON, N. J.—Anthony G. Dietl was installed as president of the Refrigeration Contractors' Association of New Jersey at that group's December meeting which was held here recently.

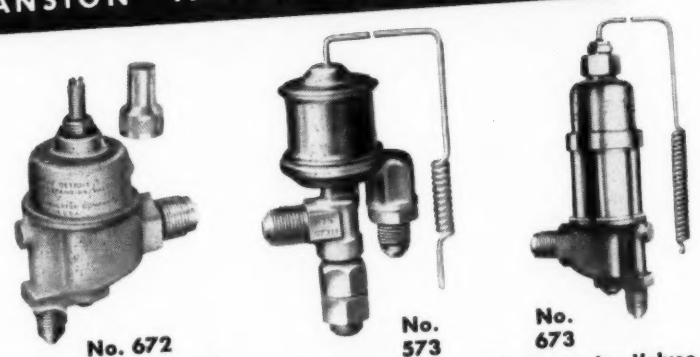
Also installed were: vice president, Lee Richardson; secretary-treasurer, C. N. Ford, and sergeant-at-arms, Harold Rohslowf.

A resident of Union, Dietl is a director of the American Society of Refrigeration Engineers and past president of the Refrigeration Service Council. He also is a member of the New Jersey Restaurant Association and Newark Real Estate Board.


"DETROIT" REFRIGERATION ACCESSORIES

Assure Complete Satisfaction

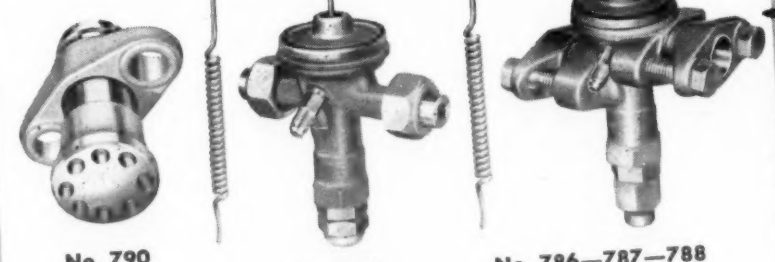
EXPANSION VALVES—DISTRIBUTORS



No. 672 "Detroit" Automatic Expansion Valve

No. 573 "Detroit" Thermostatic Expansion Valves

No. 673

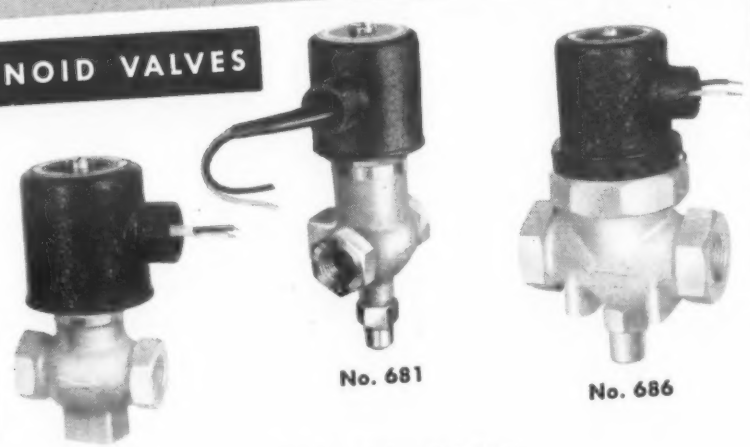


No. 790 "Detroit" Distributors

No. 899 "Detroit" Thermostatic Expansion Valves

No. 786—787—788

SOLENOID VALVES



No. 683-3 "Detroit" Solenoid Valves

No. 681

No. 686

Check THESE IMPORTANT FEATURES

EXPANSION VALVES—DISTRIBUTORS

Complete range of capacities up to 20 tons Freon-12. Gas-charged power elements—quick response—prevent motor overload. Diaphragm and bellows types. Operating characteristics for all applications.

CAPACITIES—Freon 12

| | |
|---|---|
| No. 672 | .35 to 3.6 tons |
| No. 573 | .5 tons |
| No. 673 | 1.2 to 3.6 tons |
| No. 899 | 1.6 to 6.0 tons |
| No. 786 | 3 to 6 tons |
| No. 787 | 6 to 11 tons |
| No. 788 | 12 to 20 tons |

(No. 899, 786, 787, and 788 have external equalizer connection.)

These are representative of the large number of valves in the "Detroit" line. Distributors are used with large valves to serve multiple refrigerant lines. No. 790 is available with flange or union connection, with from 2 to 18 passes.

SOLENOID VALVES

Wide range of sizes for liquid line, suction line and water service. "Detroit" Solenoid Valves are quiet, compact and powerful. They may be used with any liquid that will not attack brass.

CAPACITIES—Freon-12 (2 lb. pressure drop)

| | |
|---|---|
| No. 683-3, orifice 1/8" | 1¼ tons |
| No. 683-3, orifice 3/16" | 3 tons |
| No. 683-3, orifice 7/32" | 3¾ tons |
| No. 681, orifice 3/8" | 7½ tons |
| No. 686, orifice 1/2" | 11 tons |
| No. 686, orifice 5/8" | 17 tons |

All capacities are for liquid line.

No. 681 is pilot operated requiring a minimum pressure drop of only one psi on refrigerant to operate the piston. No. 686 is a heavy duty, large capacity pilot operated valve which requires a pressure drop of only 1¾ psi on refrigerant, 5 psi on water to operate the piston.

5120

DETROIT LUBRICATOR COMPANY

DIVISION OF AMERICAN RADIATOR & Standard Sanitary CORPORATION

GENERAL OFFICES:

5900 TRUMBULL AVENUE • DETROIT 8, MICHIGAN

Canadian Representatives—Railway and Engineering Specialists Limited, Montreal, Toronto, Winnipeg

"DETROIT"

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories
"Detroit" Expansion Valves and Refrigeration Accessories
Stationary and Locomotive Lubricators

In the Heart OF DETROIT

FACING GRAND CIRCUS PARK

The Tuller, a modern hotel for those who want the best! Convenient to Offices, Theaters, and Shops. Friendly, courteous service and real Hotel Comfort. The Tuller Coffee Shop or Cafeteria for your Dining Pleasure at modest prices. It pays to stay at Hotel Tuller.

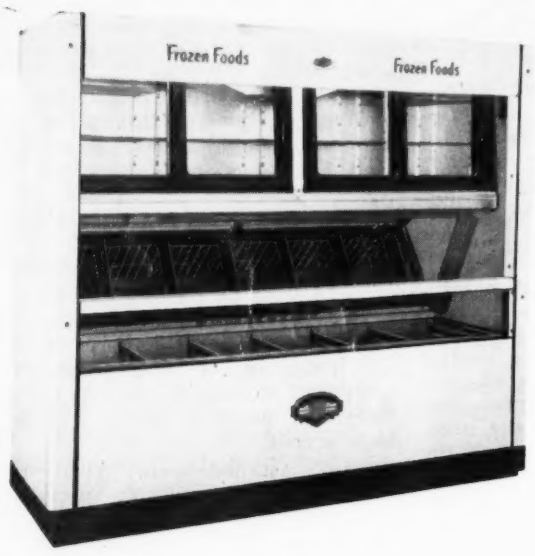
VISIT OUR COCKTAIL LOUNGE ONE OF DETROIT'S FINEST

800 ROOMS $2.75 WITH BATH FROM

HOTEL TULLER

RICHARD C. HODGES Mgr.

# 2 FOR 1




**SOMETHING REALLY DIFFERENT—**

**This single self-service refrigerator has two distinct display-storage departments—one for frozen foods and one for dairy products.**

The Model RCL-8 illustrated

The new Warren 1949 Model RCL Combination Dairy-and-Frozen-food Refrigerator offers the services of *two* individual, compact refrigerators at the purchase price of a single unit. These two types of foods differ drastically in the refrigeration which they require, yet Warren engineers have made it possible for them to be reliably preserved, appealingly displayed, and sold rapidly from a one-stop shopping center.

Developing distinctively new, top-quality refrigerators is Warren's progressive policy. Why not investigate our franchise opportunities?

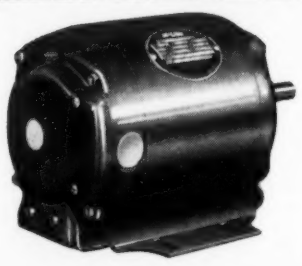
Write Dept. 211 for information and literature.

WARREN QUALITY ATLANTA, GA.

The WARREN COMPANY INCORPORATED
905 MEMORIAL DRIVE, S. E. ATLANTA 1, GEORGIA



NO NOISE ...NO VIBRATION WITH
B-Line MOTORS

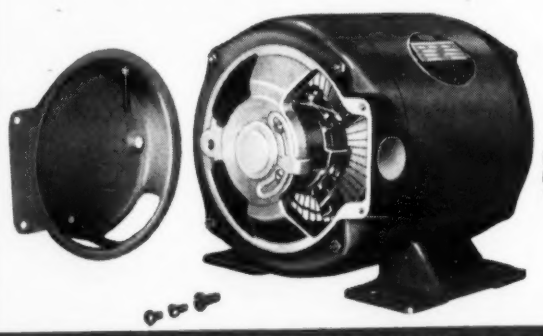


RESILIENT MOUNTED
CAPACITOR TYPE 1/6 — 3/4 H.P.

Refrigeration and air-conditioning equipment must be furnished with motors that do not vibrate, rattle, or make unnecessary mechanical noise.

B-LINE motors are designed to eliminate all the clanks, squeaks and shakes sometimes found in motors. The resilient mounted Capacitor motor has inbuilt rubber cushions surrounding the bearings, giving it quiet, floating operation. Repulsion-Induction Brush-Lifting motors from ½ to 1½ H.P. eliminate all brush and commutator noise when the brushes are lifted from the commutator by a new simplified, centrifugal mechanism as the rotor reaches 75% of full load speed.

Try a B-LINE motor on your next application . . . comparison will prove B-LINE superiority. Send for Bulletin 5000C or contact your local B-LINE jobber.



REPULSION - INDUCTION
BRUSH LIFTING MOTOR
1/2 — 1-1/2 H.P.

THE BROWN-BROCKMEYER COMPANY
DAYTON 1, OHIO


# 4-H Club Award Winners Find Frozen Food Research Not Only Gets Scholarships, But Helps Their Families and Communities

CHICAGO—Winners of the 1948 Fowler McCormick scholarship award in the 4-H frozen foods contest are the four girls who received all-expense trips to the 27th National 4-H Club Congress in Chicago as guests of the International Harvester Co., donor of the awards.

Winner of the $200 scholarship award in the central extension section was Martha Klepfer, 20, of Speer, Ill.

In the last five of her 10 years of 4-H work, Martha specialized in frozen foods, preserving 2,914 lbs. of meat, fruit, and vegetables in that way. Miss Klepfer says her family enjoys fresh peas or blackberries in midwinter and fresh fried chicken in the month of February.

With no freezer at home, Martha rented three lockers in a nearby town, but even with this added effort, the project has paid big dividends in money saving and in enjoyment for her rather large family. Martha once prepared a special demonstration on the freezing of apricots, which met with immediate success and was repeated many times, earning her the nickname of "Apricots."

This year she experimented with freezing cantaloupe and finally succeeded with a product that kept the original flavor. Martha served her club as junior leader for food projects, and also as president.

Winner in the eastern extension section was Mary Louise Young, 15, of Middletown, Md., who has been a 4-H'er for five years, two of them devoted to frozen foods, in which she prepared and put down 554 lbs. of meat, 132 qts. of vegetables, and 198 of fruit. This, she pointed out, was a great contribution to the family living.

Her county home demonstration agent, Loa Davis, says that Mary Louise, coming from a 4-H family, is more mature than her years would indicate, that she helps with the work on the 260-acre farm, is dependable, and is an outstanding girl in the county. She has dramatic ability and is generous in helping others.

Winner in the western extension section was Joyce Kenagy, 16, of Loveland, Colo.

In seven years of 4-H work, Joyce has devoted the last three to a frozen foods project. To date Joyce has prepared and frozen 1,067 lbs. of meat, 44 packages of fish and poultry, 187 qts. of fruit, 83 qts. of vegetables, and 34 qts. of miscellaneous foods. She learned to judge what fruits are best suited for freezing, following instructions given by the U. S. Department of Agriculture.

Miss Kenagy found she could successfully preserve baked pies, cakes, and rolls in the freezer, also sandwiches and green peppers for winter salads. She has given several frozen foods demonstrations and trained other girls to do so. Joyce also has given 16 talks, of which four were on the radio; written 31 news stories, and at 4-H camp above Cameron Pass, she edited the camp newspaper.

Winner in the southern extension section was Betty Ann Carter, 18, of Louisville, Miss.

In three years of her nine years of 4-H Club work, Betty Ann has concentrated on her frozen foods project. She rented a locker and found that, for best results, care must be taken in selecting the right varieties of seeds, type of soil and the fertilizer used, the right time for gathering, and the correct method of blanching and cooling.

To date Betty Ann has frozen 655 lbs. of 130 different products. Her frozen food demonstrations won her a first prize of $50 at the state fair, and several trips. Betty Ann is an all-around 4-H girl, serving as junior leader for five years, president for two years, and now she is secretary of the county 4-H organization.

**Winners of Fowler McCormick Scholarship in the 4-H Frozen Foods contests are (left to right) Martha L. Klepfer, Speer, Ill.; Mary Louise Young, Middletown, Md.; Joyce Kenagy, Loveland, Colo.; and Betty Ann Carter, Louisville, Miss.**

## Emerson Heads Colorado Frozen Food Locker Assn.

DENVER — John S. Emerson of Grand Junction, Colo., was named president of the Colorado Frozen Food Locker Association at the group's second annual convention held here Dec. 6 and 7.

About 120 locker owners and operators attended the two-day meeting. One of the more unusual features was a complete display of locker refrigeration equipment.

Other new officers include Roger Jones of Longmont, vice president; Lloyd Case of Denver, re-elected secretary; and C. O. Templin of Fort Collins, treasurer. New directors include Jones; J. R. Mayberry of Denver; Kelley Jackson of Eads; and R. M. Ritter of Durango.

## *Graybar Electric Distributes Carrier Line In Ga. and Fla.*

JACKSONVILLE, Fla.—According to announcement by D. M. Herzog, branch manager of the Carrier Corp., Graybar Electric Co. has been appointed distributor in north Florida and south Georgia for the complete line of Carrier air conditioners and food freezers.

Florida Weathermakers, Inc., which has represented Carrier Corp. in this area for the past 10 years, will continue to handle the complete line of Carrier installed air conditioning, refrigeration, and heating equipment.

## Yale & Towne Stops Production of Irons

BUFFALO—The Buffalo Div. of the Yale & Towne Mfg. Co. announced it has suspended manufacture of electric irons in its plant here.

As a result, employment has declined to about 100 from a peak of 300 early this year.

"The appliance market is pretty well glutted," explained manager Leo J. Pantas. "We are going ahead, however, with our production of electric heating units and are expanding our lines in this field."

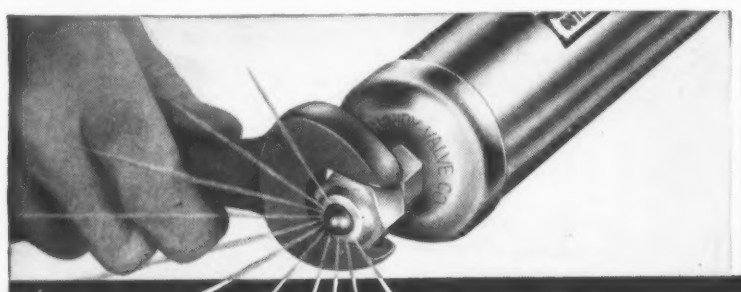
Establishment of Yale & Towne's Buffalo Div. here after the war marked the entrance of the company into the electric appliance market.

## *Bush Mfg. Will Pay 2 Dividends*

WEST HARTFORD, Conn.—Directors of the Bush Mfg. Co. here have voted to pay a dividend of 28⅛ cents per share on the 4½% cumulative convertible prior preferred stock and 31¼ cents per share on the 5% non-comulative preferred stock payable Jan. 3, 1949 to stockholders of record Dec. 16, 1948, E. M. Flannery, secretary, has announced.

## Buffalo Firm Incorporates

BUFFALO — United Appliance Service, Inc., has been incorporated here with capital of 1,000 shares. Incorporators are Leiland W. Cragg, David D. Nash, and Harrison J. Greene.

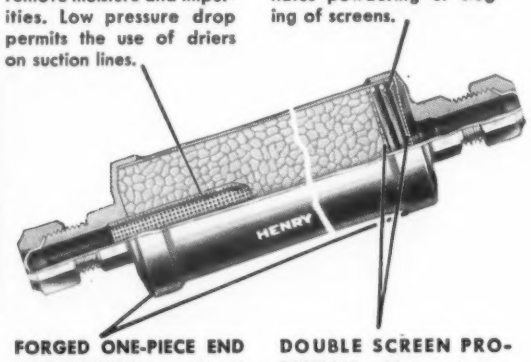
ON HENRY DRIERS THIS HISS MEANS OK!

The Hiss a Henry Drier emits when its seal cap is loosened is the escaping rush of dehydrated air sealed inside. This hiss assures you your Henry Drier does not leak and is in factory-dry condition. It means you are installing a 100% efficient, leak-proof drier on your job. It guarantees removal of all moisture from the refrigerant with practically no pressure drop. It means you can be completely confident in the drier you install.

**ONLY HENRY DRIERS GIVE YOU ALL THESE FEATURES**

**PATENTED DISPERSION TUBE**...prevents channeling, insures maximum utilization of Silica Gel to remove moisture and impurities. Low pressure drop permits the use of driers on suction lines.

**SPRING COMPRESSED DEHYDRANT**...exclusive Henry feature, keeps Silica Gel tightly packed, eliminates powdering or clogging of screens.




**FORGED ONE-PIECE END CAP-FITTINGS**...machined from one forging. Withstands all installation strains. Leak proof.

**DOUBLE SCREEN PROTECTION**...filters out particles as small as .003" diameter. Stands any system pressure.

*Sold by leading wholesalers*

HENRY VALVE CO. CONTROLLING FLOW SINCE 1914

Control Devices, Valves, Driers, Strainers and Accessories for Refrigeration and Air Conditioning and Industrial Applications.

HENRY VALVE CO.
3260 W. Grand Ave., Chicago 51, Ill. • Cable: HEVALCO Chicago



FOR CUSTOMER SATISFACTION

on your next job choose a
MILLS
a condensing unit for every installation

Mills Industries, Incorporated • 4100 Fullerton Avenue • Chicago 39, Illinois

## S. A. Whitt Elected Vice President of Engineering At Cordley & Hayes Co.

NEW YORK CITY — Election of Sidney A. Whitt as vice president of engineering for Cordley & Hayes Co. was announced recently by C. M. Cordley, president. Whitt has been director of engineering for the water cooler company for the past four years.

Sidney A. Whitt

In his new responsibilities Whitt will direct all development, design, and application engineering for water cooling and other allied fields.

Since being graduated from the College of Engineering, University of Alabama, Whitt has contributed many developments and inventions to the refrigeration and air conditioning industry.

These include a wind tunnel for research on heat transfer equipment; railroad heating equipment; high-temperature brazing furnace; aircraft aluminum intercooler; code for rating unit heaters; graphical method for rapid selection of finned-type heating and drying coils; and early design of a locker storage system. His method for rating air conditioning equipment has been presented in a handbook.

Before joining Cordley & Hayes, Whitt served in engineering and technical executive capacities with York Corp., Nash-Kelvinator Corp., Fedders Mfg. Co., and Baker Ice Machine Co.

## *Glass-Enclosed Case Ups Vegetable Sales 35%*

CASPER, Wyo.—Sales of fresh vegetables have jumped 35% since a new reach-in display case with controlled temperature and humidity was installed at Sandison's Tip Top Food Market, 345 East 2nd St., according to Tommy Sandison, co-proprietor.

The new case is glass enclosed part way down from the top, for greater visibility. A "Garden Fresh Vegetables" neon sign has been installed across the top.

## *Cincinnati Contracting Firm Reorganizes Executive Staff*

CINCINNATI—Everett W. Townsley, formerly treasurer and general manager of the C. M. Robinson Co. here, has been elected president of the firm to replace Robinson, who resigned because of ill health. Townsley had been treasurer and general manager since the firm was organized in 1916.

At the same time, Robert L. Niehaus was named vice president and sales manager and Miss Katherine E. Engel, secretary, was given the duties of treasurer.

The company handles commercial and industrial refrigeration and air conditioning engineering and contracting.

## Salt Lake City Gets New Store

SALT LAKE CITY—Formal opening of a new appliance store at 147 S. State St. here was announced by Ralph O. Bradley, manager.


NOT 1 . . . NOT 2 . . .

BUT "3" REFRIGERATED DECKS

Look for the *NEW* FOGEL Continuous "Triple Deck" Open Style Display Case advertised in next week's issue.

It's *the* outstanding case of its type in the field. Be among the first to introduce this "Super Merchandiser" in your area. Write, Wire, or Phone for complete "Sales Franchise" information. Do it *TODAY!*

FOGEL REFRIGERATOR COMPANY
5400 Eadom St.—Phila. 37, Pa.
Phone JE 5-8300—Cable "FOREFCO"


## *Employe Relations To Be Stressed at Seeger*

ST. PAUL — Seeger Refrigerator Co. is embarking on a six-month "human engineering" training program of its employes from top management down to assembly line labor under arrangement with Vic Short, organizer of the Institute of Human Science, which recently completed a similar in-training employe relations program with Frigidaire.

Launched here in mid-December with three seminar sessions at Hotel Lowry, the half-year industrial program will be carried on in the Seeger plants and offices after the first of the year.

Labor, management, production, and human relations problems are discussed and improved upon under Short's program.

Short said the average man in industrial management is unqualified for his job when it is first thrust upon him. He noted that where technicians are promoted to supervisory capacities they are assumed to be leaders as well.

## Smith To Represent Ref. Corp. of America In West

NEW YORK CITY — Edward R. Legg, president of Refrigeration Corp. of America, has announced the appointment of Harding M. Smith, Seattle, as Pacific Coast representative for the firm.

H. M. Smith

Smith served for a number of years with the Joe Lowe Corp. in Los Angeles, and more recently represented the Benjamin Holland Mfg. Co. of Seattle. He is well known in ice cream and dairy circles on the coast.

## *Evercold Changes Address*

CHICAGO—Evercold Refrigeration Equipment here, commercial refrigeration and air conditioning firm, has moved to 3355 W. Ogden Ave., the company has announced.

## Rising Ice Cream Sales Ascribed To Wider Use Of Self-Serve Fixtures

LINCOLN, Neb.—Use of reach-in type self-service refrigeration fixtures has quadrupled sales of ice cream in food and drugstores in the past eight years, members of the Nebraska Ice Cream Manufacturers Association were told by speakers at the annual convention here.

Ice cream has made phenomenal gains as a food store item, it was stated by Robert C. Hibben, executive secretary of the National Ice Cream Manufacturers, who pointed out that 13 years ago only 15% of the nation's grocery stores handled ice cream, whereas the figure today is 68%.

Development of efficient and attractive new refrigerated cases and the progressiveness of retailers in adopting the use of such fixtures were credited with boosting the sales of ice cream through a greater variety of retail outlets.

M. L. Finneburgh, Chicago, and Bryan Blalock, Marshall, Tex., who spoke on increasing the consumption of ice cream, pointed out the importance of using self-service cases in good traffic locations. They stressed the fact that since 1942, the wholesale price of ice cream has increased only 26% compared to the 150 to 200% hike in cost of other foods.

## *Cauhorn Will Cover 8 Michigan Counties for Super-Cold Line*

DETROIT—The Cauhorn Distributing Co. here has been appointed distributor for the Super-Cold line of commercial refrigeration equipment.

The Cauhorn firm, which intends to build a new showroom here soon, covers an eight-county area in southeastern Michigan.

## Schatter To Handle Presteline

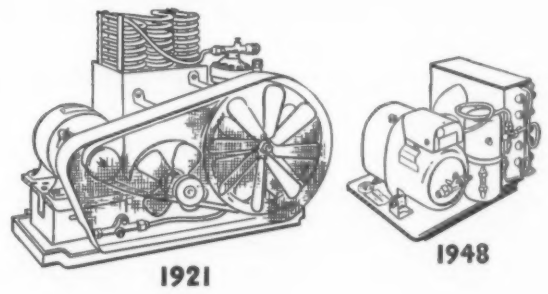
FORT WAYNE, Ind. — Schatter Hardware Co., Inc., appliance division, 601 Clinton St., has been appointed distributor for the Presteline Custom 8 electric range in the Fort Wayne area and certain counties in Ohio and Michigan.


Freezing Facts by Servel

Close-ups On Compactness

WE'VE COME a long way from the cumbersome radio set Mother had in the parlor. Persistent research and brilliant engineering have enabled radio makers to compress ample power and full tone into a compact, portable model no bigger than a box of candy and as handy as a wrist watch.

Servel engineers, too, have made great strides in reducing the size of commercial condensing units while adding new and improved performance features. For example, an early vintage ⅓ HP unit measured over 27″ long, 18″ wide, and 35″ high. It tipped the scales at 225 pounds. But today's Servel Supermetic ⅓ HP unit fits easily into a space approximately 17″ long, 16″ wide, and 11″ high! Design improvements have reduced its weight to 90 pounds!



1921 1948

This modern condensing unit lasts longer, it is more dependable, maintenance costs are decidedly low. Higher grade bearing materials, "forced-feed" lubrication, and many other features contribute to the compactness and greater efficiency of the Supermetic. Servel's hermetic units are available in all sizes to fit every application. Send for free copy of illustrated folder, "Servel Supermetic." Address Servel, Inc., Division ER, 1812 Kentucky Ave., Evansville 20, Ind.

More than a hundred thousand satisfied users testify to the quality of Servel Supermetic units, the broadest and most versatile line of hermetically sealed units designed for every popular commercial application.

1. Store Fixtures
2. Milk Coolers
3. Home Lockers
4. Beverage Coolers
5. Vending Machines
6. Room Coolers
7. Vehicle Refrigeration
8. Farm Freezers
9. Water Coolers
10. Industrial Cooling

Servel SUPERMETIC

## They'll Do It Every Time . . . . By Jimmy Hatlo

AT LAST LUGLOW GOT HIS BIG OPPORTUNITY TO ENTERTAIN HIS GAFFER
CLEAN THE HOUSE! GET OUT THE GOOD SILVER! THE BOSS IS COMING TO DINNER! I DIDN'T HAVE A CHANCE TO CALL YOU! GET ALL DOLLED UP! THIS IS IMPORTANT!
JIMMY HATLO
COPR 1948, KING FEATURES SYNDICATE, Inc., WORLD RIGHTS RESERVED.
SO WHO COMES A-VISITIN' JUST BEFORE THE BOSS IS DUE--? READ ON, PAL, READ ON ...
'LO, COUSIN LUG-- JUST AS SOON'S I GOT MY PAROLE I SAYS TO AMY... "LET'S GO SEE GOOD OL' LUG--"
THANX, AND A TIP OF THE HATLO HAT TO JERRY LOBATZ, ROCKVILLE CENTER, LONG ISLAND.
11-16


## Do You Have 'One Foot In the Door'?

A NEW Line of
SUPERIOR DRIERS
The DRIERS with the Plus Features

★ MODERN DESIGN
★ EFFICIENT OPERATION
★ REFILLABLE AND NON-REFILLABLE TYPES
★ ALL BRASS CONSTRUCTION

*For complete details and specifications on the New Driers and other Superior products, ask your Wholesaler for a copy of our NEW Catalog R3.*

*(or a copy may be obtained by writing to us)*

159

Superior Valve and Fittings Co.
1509 WEST LIBERTY AVE., PITTSBURGH 26, PENNA.
OFFICES IN PRINCIPAL CITIES STOCKS CHICAGO (6) - LOS ANGELES (15) - JOBBERS EVERYWHERE


AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark registered U. S. Patent Office; Est. 1926

AIR CONDITIONING AND REFRIGERATION News

Copyright 1948, Business News Publishing Co.

F. M. COCKRELL, *Founder*

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $5.00 per year; 2 years $8.00. All other foreign countries: $7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

GEORGE F. TAUBENECK
*Editor and Publisher*

PHIL B. REDEKER, *Editorial Director*

C. DALE MERICLE, *Associate Editor*

JOHN SWEET, *Assistant Editor*
HUGH MAHAR, *Assistant Editor*
GEORGE HANNING, *Assistant Editor*
ROY DENIAL, *Assistant Editor*
*Editorial Assistants:* MARGARET DEAN, MARGARET POMMERENING, AND LORRAINE MAJOR.

E. L. HENDERSON, *Business Manager*
ROBERT M. PRICE, *Adv. Representative*
ALLEN SCHILDHAMMER, *Adv. Rep.*
ALLEN S. RUSSELL, *Adv. Rep.*
BETTY JANE KING, *Adv. Secy.*
YVAUGHN CRYSLER, *Subscription Mgr.*
WALTER J. SCHULER, *Production Mgr.*

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 55, NO. 17, SERIAL NO. 1,032, DECEMBER 27, 1948

# Frozen Food Progress

Although the frozen food industry has weathered a few storms lately, it's true that an increasing amount of the nation's food supply is being quick frozen. And the industry is becoming stabilized.

At the beginning of 1939, it was estimated that stocks of frozen fruits stood at 125,000,000 pounds, while stocks of frozen vegetables were tabulated at 65,000,000 pounds. At the end of 1947, frozen fruits in storage totaled 391,000,000 pounds, and stocks of frozen vegetables almost 325,000,000 pounds. Impressive? Huh? You "ain't seen nothing yet." By 1950, these amounts of frozen foods may be more than doubled. And that's just a beginning.

The future of this industry seems assured. Nevertheless, salesmen must implant the frozen food idea into the minds of more and more people before this money-saving and taste-tickling food product arrives at the threshold of its manifest destiny.

A major part of this pioneering job devolves upon the manufacturer of frozen food display cases and home and farm freezers. His own retailer is the important link in the chain-reaction of selling the idea to the public.

Said retailer must not be franchised willy-nilly, lest he give this great new industry a "black-eye" by over-promising and underselling. Informative advertising, and improved merchandising programs, must be concentrated on the smartest and most responsible specialty dealers before this coming business can come of age.

By 1950, it is freely predicted, commercial frozen food dispensers and big freezers will move at a million-units-per-year rate.

Of America's approximately 500,000 food retailing outlets, it is estimated that only 12 to 15% now carry frozen foods.

Thus it's obvious that the commercial dealer has before him a rich-and-ready market for all types of frozen food display cases and a secondary market for low-temperature storage cases among food-handlers and servers. All he has to do to profit handsomely is promote this market and sell it.

And as for the BIG refrigeration installations which can be sold to the skyrocketing frozen foods field:

Starting at the top, some 1,800 American firms are freezing food commercially today. Thousands of cold-storage warehouses are preserving it. Together, they represent a tremendous market for augmented refrigeration installations for preserving frozen foods—a new storage worry for most of them.

Of America's 5,000 wholesale grocery distributors, perhaps 28% include frozen foods among their responsibilities. To these prime prospects for BIG low-temperature installations you can add some 10,000 locker plants—all of which are bursting their seams. Lumped together, these prospects for "the Big Stuff" total up to an astronomical sales potential for zero-storage refrigeration equipment.

The contractor, the service and installation organization, and the specialty dealer would do well to check upon each operation in the frozen food chain in his territory—from the processor to the retail dealer—in looking for new business.

Incidental notes: Some 40% of the frozen food absorbed annually is diverted to such promotionally-alert food processors as dairies, ice cream plants, bakeries, restaurant chains, etc. Another 25% goes to hotels, hospitals, clubs, and "name" restaurants; to railroads and airlines, and other "public service" users whose reputation depends upon high quality. Do they require new refrigeration equipment for zero-storage of frozen foods? You're darned right they do!

# Tests Show Importance of Low Temperatures In Prolonging Life of Pre-Packaged Produce

NEW YORK CITY—Tests conducted under a research project by the U. S. Department of Agriculture "indicate that Long Island grown broccoli, Brussels sprouts, and cauliflower can be successfully pre-packaged at time of harvest and held for a reasonable marketing period," a report on the tests states.

"The salable period at 65° F. to 70° F. is approximately 48 hours, and it becomes longer with progressively lower temperatures," the report says.

"The results clearly show the importance of low temperatures in prolonging the market life of prepackaged produce. . . . The results of the present test suggest the advisability of lowering the commodity temperatures as quickly as possible, and of maintaining low temperatures during the transit and marketing period."

Two tests were made on these three vegetables by the researchers. In one, the commodities were packaged at Riverhead, Long Island and held overnight in a 42° F. room and on the following day hauled to New York City in a non-refrigerated truck. Commodity temperatures were 68° F. at the time of packaging and averaged approximately 55° F. at time of arrival here.

In the second, conducted about a month later, the packaged commodities were held outdoors overnight in a closed automobile before being transported to New York City. Commodity temperatures were about 54° F. at time of packaging and averaged approximately 50° F. at time of arrival, the report says.

The broccoli and Brussells sprouts were over-wrapped in sheets of film for the first test and placed in film bags for the second. The cauliflower was placed in bags for both tests.

Films used were moistureproof cellophane, perforated and unperforated, semi-moistureproof cellophane, cellulose acetate, and pliofilm, perforated and unperforated.

Of the 10 packages used in each of the six film classifications, five were placed in a 67° F. room from which two were removed after two days and three were removed after four days.

The other five packages were placed in a 42° F. room from which two were removed after five days, two after eight days, and one after 11 days.

Upon removal the packages were tested for weight, appearance of both package and produce, presence of mold or decay, odor, and flavor—both raw and cooked.

Carbon dioxide tests were made during the first experiment and both carbon dioxide and oxygen tests were made in the second.

Comparative results of the tests, in brief, showed that loss of weight was lowest in produce which was enclosed in non-perforated pliofilm or in non-perforated moistureproof cellophane.

Perforating these two films had little effect on the moisture loss, according to the report. Of all the films tested, the greatest loss in weight occurred with cellulose acetate and was reflected in the more rapid visible drying out of the produce.

All four non-perforated films, the report states, showed up the transfer of oxygen through the films so that as the produce respired, the oxygen content of the enclosed atmosphere became reduced, the carbon dioxide content increased considerably, and disagreeable odors and flavors of suboxidation readily became apparent.

This deleterious effect, the report asserts, was most evident with cauliflower and least evident with broccoli. It was more pronounced at 67° F. than at 42° F.

Up to a certain point there was a beneficial effect on broccoli from enclosing it in the four non-perforated films. This was reflected in the green appearance and longer period of salability of the broccoli.

In the perforated films, there was a tendency for yellowing of the broccoli and for a reduction in the period of salability on account of poor appearance.

On the other hand, the development of slightly sweetish flavors and the slight trace of flavors of suboxidation noted by some observers suggest that broccoli should not be packed in gas tight packages without some ventilation.

There was no evidence of suboxidation with perforated films or with the cellulose acetate. In general, the period of salability was greater with the perforated films than with the cellulose acetate because of their effect in reducing drying out of the produce.

Very little decay developed in any of the commodities tested.

In all tests, cellulose acetate was the clearest of all films and gave the best view of the packaged produce.

The moistureproof and semi-moistureproof films showed some fogging caused by the condensation of numerous, tiny droplets of moisture on the inner surface of the film. After the temperatures had been raised to 70° to 75° F., this fogging cleared up, however.

No fogging occurred on pliofilm, although large drops of condensed moisture were occasionally noted in some packages.

In both tests the pliofilm had a slightly cloudy or smoky appearance that made the produce less clearly visible. Most observers considered this to be a defect of only minor importance, the report declares.

## Carrier Consolidates Offices

NEW YORK CITY—The Carrier Corp. has announced the consolidation of its offices here at 385 Madison Ave. Offices affected are the international division, marine department, and direct and dealer sales offices for the northeastern section of the country. These offices were formerly located in the Chanin and Chrysler buildings.

## $50,000 Refrigerating Plant Set for 'Fishermens Pier'

SAN DIEGO, Calif. — The San Diego Harbor Commission has approved the construction of a $50,000 refrigerating plant and administrative office on Fishermens Pier here by the Pan Pacific Fisheries Co. of San Pedro, according to John Bate, port director.

Bate said the company would operate its own fishing fleet and would also buy some fish from other local boats.

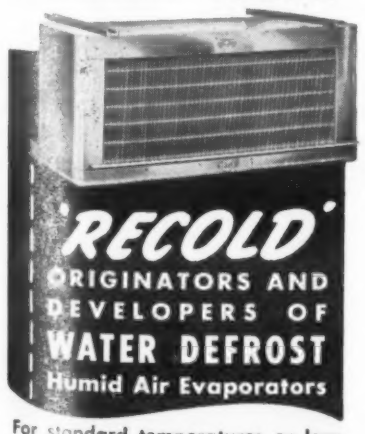
## Liquid Carbonic Net Profit of $2,747,906 Exceeds Last Year

CHICAGO—Consolidated net profit of $2,747,906, or $3.01 per common share for the year ending Sept. 30 has been reported by the Liquid Carbonic Corp. here.

This compared with a consolidated net profit of $2,002,829, or $2.40 per common share for the 1947 fiscal year.


U. S. Pat. 2,219,393
Canada Pat. 394,209
New Zealand Patent 82,359

COMMERCIAL DOMESTIC

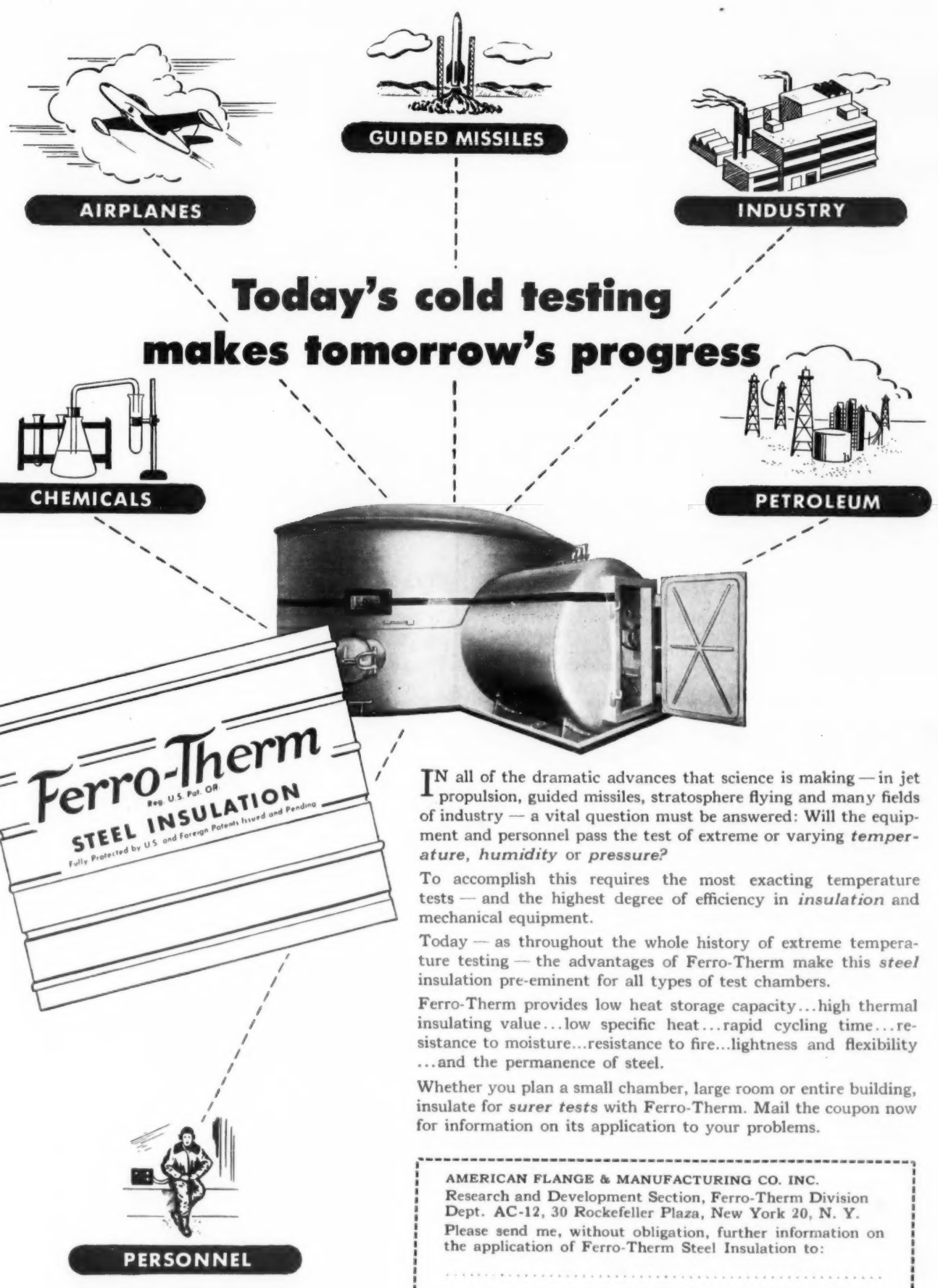


'RECOLD'
ORIGINATORS AND DEVELOPERS OF
WATER DEFROST
Humid Air Evaporators

For standard temperatures or low temperatures "Recold" water defrost ceiling coils are being more widely accepted in every type of installation. "Recold" manufactures equipment to meet every commercial refrigeration need.

REFRIGERATION ENGINEERING, INC.
7250 East Slauson Ave.
Los Angeles 22, Calif.






IN all of the dramatic advances that science is making — in jet propulsion, guided missiles, stratosphere flying and many fields of industry — a vital question must be answered: Will the equipment and personnel pass the test of extreme or varying *temperature, humidity* or *pressure?*

To accomplish this requires the most exacting temperature tests — and the highest degree of efficiency in *insulation* and mechanical equipment.

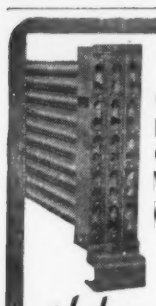
Today — as throughout the whole history of extreme temperature testing — the advantages of Ferro-Therm make this *steel* insulation pre-eminent for all types of test chambers.

Ferro-Therm provides low heat storage capacity...high thermal insulating value...low specific heat...rapid cycling time...resistance to moisture...resistance to fire...lightness and flexibility ...and the permanence of steel.

Whether you plan a small chamber, large room or entire building, insulate for *surer tests* with Ferro-Therm. Mail the coupon now for information on its application to your problems.

AMERICAN FLANGE & MANUFACTURING CO. INC.
Research and Development Section, Ferro-Therm Division
Dept. AC-12, 30 Rockefeller Plaza, New York 20, N. Y.
Please send me, without obligation, further information on the application of Ferro-Therm Steel Insulation to:

.....
.....
Name.....
Firm.....
Street.....
City.....Zone.....State.....



*Available from 1/2 to 10 H.P.*

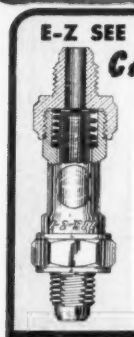
**CLEANABLE DOUBLE-TUBE COUNTER-FLOW WATER-COOLED CONDENSERS**

*Write for literature*

*Halstead & Mitchell*
BESSEMER BLDG.
PITTSBURGH 22, PA.



**E-Z SEE LIQUID INDICATORS CAN'T LEAK!**



***Because . . .***

Remco's unique foolproof construction provides that springs in each end form a positive seal on the Neoprene gaskets by automatically compensating for 'cold flowing' and difference in expansion and contraction between the glass and the body. E-Z-See is easy to see thru—and guaranteed perfectly safe for working pressures up to 500 PSI.

*Bulletin available on request.*

**REMCO** INCORPORATED ZELIENOPLE, PA.

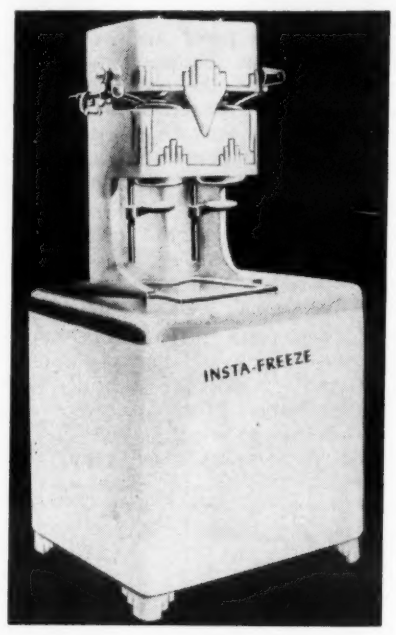


**WILSON**
**REFRIGERATION, INC.**
- FARM AND HOME FREEZERS
- REACH-IN REFRIGERATORS
- WALK-IN REFRIGERATORS
- FARM MILK COOLERS

DIVISION OF WILSON CABINET CO., INC.
SMYRNA • DELAWARE


# What's New

## 7 Secs. Makes 'Ice Cream' From Fruit Juice, Milk




* * *

BEVERLY HILLS, Calif.—A patented machine that is claimed to freeze a milk or fruit juice confection in seven seconds has been introduced by the Par-Fay Freeze Sales Co. here.

The machine, called an Insta-Freeze, has a double freezing head and can produce a finished product from each head in seven seconds, according to E. H. Burnside of the company.

"The machine is capable of taking a 4 to 6% butter-fat milk mix and by the rapidity of freezing cause a rich and smooth quality freeze," Burnside declared. "Insta-Freeze will also produce a creamy, smooth product from pure fruit juices that cannot be distinguished from ice cream, and still has absolutely no butter-fat content."

The unit is made in either a backbar model or a self-contained model.

The backbar model consists of a 1½-hp. motor and compressor, one inner cooler, double head equipped with two ⅓-hp. motors, two automatic feeds, and controls. It measures 14 in. wide by 14 in. deep.

The self-contained model has the same features as the backbar unit but is mounted on a cabinet measuring 23 in. by 26 in.

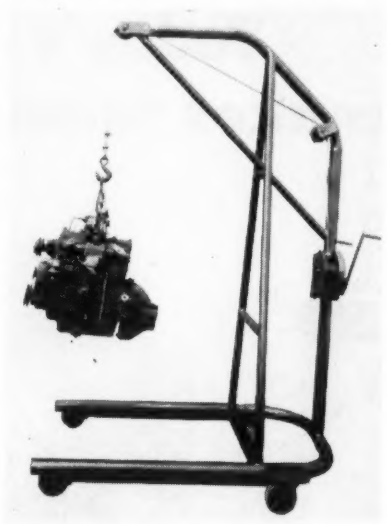
The Insta-Freeze Co., national distributor, and the Par-Fay Freeze Sales Co. are both located at 9815 Wilshire Blvd. here.

## Safety Gear Holds Load If Crane User Stops Cranking

CHICAGO—Three new portable shop cranes, equipped with a patented safety spur gear winch that requires only seven turns of the crank to lift a load one foot, are being manufactured by Grand Specialties Co., 3135 Grand Ave., here.

The cranes also feature a patented safety device that holds the load at the position it is in whenever the operator stops turning the crank.

The No. 1-C crane has a lift up to



7 ft., No. 2-C up to 8 ft. 6 in., and the No. 7-C up to 10 ft. 8 in. The first two have a capacity of 3,000 lbs. and the third a capacity of 4,000 lbs. The No. 7-C is said to have been tested at 7,000 lbs. without fractures to the material or winch.

The No. 1-C weighs 350 lbs., No. 2-C 365 lbs., and No. 7-C 480 lbs.

The winch is said to have sufficient strength to carry the maximum load on a single cable line with one man.

On the model 7-C, the boom can be extended to 79 in. When folded down it is only 48 in. from the ground and can fit under a 6-ft. opening and through a 32-in. wide doorway.

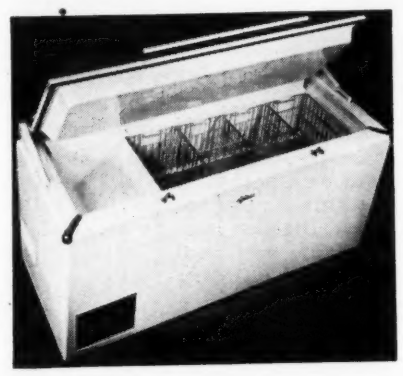
The boom and winch on this model weigh only 185 lbs. and may be removed from the wheel carriage by removing one bolt. The 7-C can be supplied with hydraulic operation with extra reach and lift capacities, the manufacturer stated.

## Gibson Offers 15-Cu. Ft. Horizontal Home Freezer

GREENVILLE, Mich. — The first horizontal home freezer to be offered to the trade by the Gibson Refrigerator Co. was announced recently.

Called the Model HF-1590, the new unit has 15-cu. ft capacity. It will store more than 500 lbs of food and has a section that will quick-freeze 60 lbs. at one time.

Other features include four top baskets, a lower section for bulk



storage, finger-touch lid, counter-balanced hinges, 5-in. thick insulation in the walls, and ¼-hp. hermetically sealed unit using "Freon-22" as the refrigerant.

Both the storage compartment and the freezing compartment are claimed to hold 0° F., plus or minus 5°.

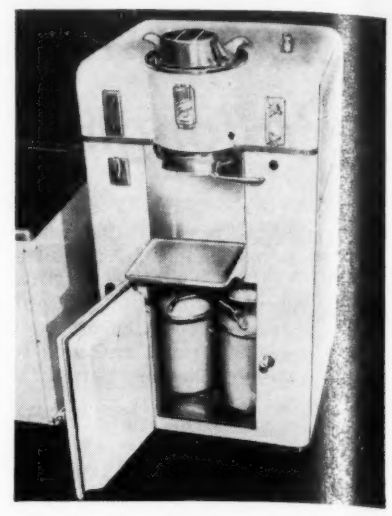
Outside measurements of the unit are 30⅜ in. in width, 72 in. in length, and 38 in. in height. The freezing compartment measures 19½ in. wide, 15⅜ in. long, and 10½ in. deep. The storage compartment measures 19½ in. wide 46⅜ in. long, and 25⅜ in. deep.

## A.C.P. Publishes Folders Describing 7 Chemicals

AMBLER, Pa.—Seven new folders, each describing a specific metal-treating chemical for preservation and paint durability, have been prepared by the American Chemical Paint Co. here.

The folders give a brief but detailed outline of what each product is, what it does, and how it is applied. The titles of the booklets and the manufacturer's descriptive subtitles are as follows:

"Alodine" (protects aluminum, anchors the finish,) "Deoxidine" (destroys rusters, bonds paint to metal, removes rust,) "Duridine" (metal cleaner and conditioner,) "Cold Spray Granodizing" (protective zinc phosphate coating process for steel,) "Lithoform" (makes paint stick to galvanized iron), "Rodine" 'for pickling,) and "Thermoil-Granodine" (for protection against rust and wear.)



* * *

## Tuthill Ice Cream Freezer Is Automatic, Vertical

CHICAGO—A fully automatic vertical ice cream freezer has been perfected by Tuthill designers, and is now being manufactured by Coleman Equipment Co. here.

The Coleman firm has announced that it has acquired from Tuthill Pump Co. the manufacturing rights to the ice cream freezer line, including patent rights, drawings, tools, and dies, and the services of key design and production men of the Tuthill organization.

The new freezers, in 2½ and 5-gal. sizes, are produced in two basic types, "V" models and "VM" models. The V models have self-contained motor and compressor units, and feature new side grills of expanded metal for maximum cooling ventilation.

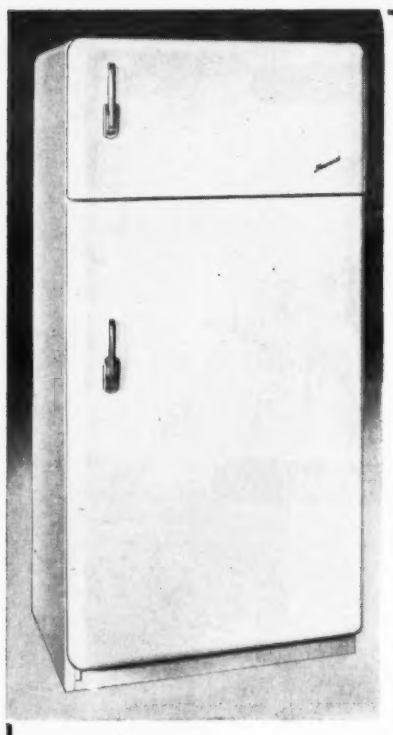
The latest VM models, designed primarily for frozen custards and malts, served directly from the freezer without the use of separate hardening cabinets, have separate, remote control motor and compressor units (either air cooled or water cooled). Under the freezer head a cork insulated storage cabinet holds four 5-gal. cans of the standard size.

Outstanding feature of both models is exceptionally rapid emptying, accomplished through an automatic switch which starts the dasher.

The freezers are also equipped with pressure controls which make and hold ice cream, custards, malts, sherbets, and other frozen products at proper temperatures, with manual operation optional.

The new models have removable scraper blades, for quick and easy cleaning and sterilization. The freezers are modern in design, with highly polished metals, and with white finish.

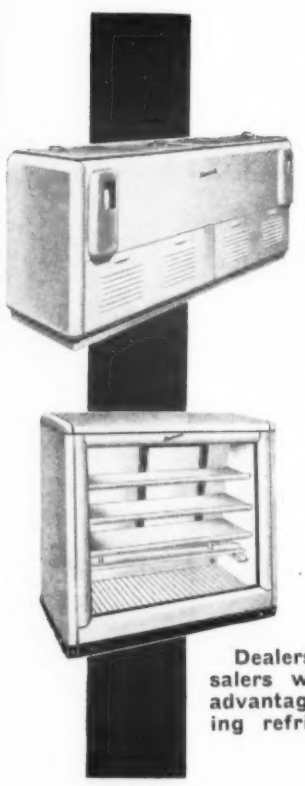
Illustrated and descriptive literature can be obtained from Coleman Equipment Co., Inc., 7529 South Cottage Grove Ave., Chicago.

**no use looking further...**

**HERE'S THE SUREST WAY TO INCREASED SALES!**

**A complete selection of refrigerators awaits your inquiries. These systems are designed for farm, city, or commercial uses.**



★ Model 1302, two temperature refrigerator, size 67½" high, 32" wide x 52½" deep. Ten cubic feet of regular refrigerator space, 3 cubic feet of frozen food locker storage. Five ice cube trays, 10 pounds of ice per freezing. Two porcelain vegetable crisper drawers. One ¼ H.P. semetric unit, for both temperatures.

★ Model FV 4 foot and FV 6 foot full vision display cases, 30" deep, 50" high. Porcelain front and top; also, porcelain shelves. Triple glass thermopane display, fluorescent lighting. Made remote and fully self-contained ready to plug in.

★ Dry beverage coolers, all self-contained, can be used as a wet cooler also. Made in a wide range of popular sizes and capacities for both wet and ice coolers—from 5 cases to 30 cases.

★ All aluminum clad Walkin Coolers and Freezers. Wide range of sizes—equipped with solid or glass door reach-in service doors.

★ Thirty and 42 cubic foot capacity Reachins with solid or glass doors, blower coil, ice maker, and baker dough retarder models.

★ Ice cream cabinets and freezers—a wide range of sizes and capacities.

**Dealers, distributors, and wholesalers will marvel at the sales advantages of Howard's outstanding refrigeration systems.**

**HOWARD**
HOWARD REFRIGERATOR CO., HATBORO, PENNA.

**WRITE FOR COMPLETE CATALOG**

**BULK and CUBE ICE MAKERS**

*FOUR SIZES — PROMPT DELIVERY*
- 250
- 500
- 1000
- 2000

*LBS. DAILY CAPACITY*

Self Contained and Remote Electric, Gasoline or Diesel Engine Driven Units.
(Refrigeration Engineering Corp.)

**RECO PRODUCTS DIVISION**
2020 Naudain Street, Phila. 46, Pa.

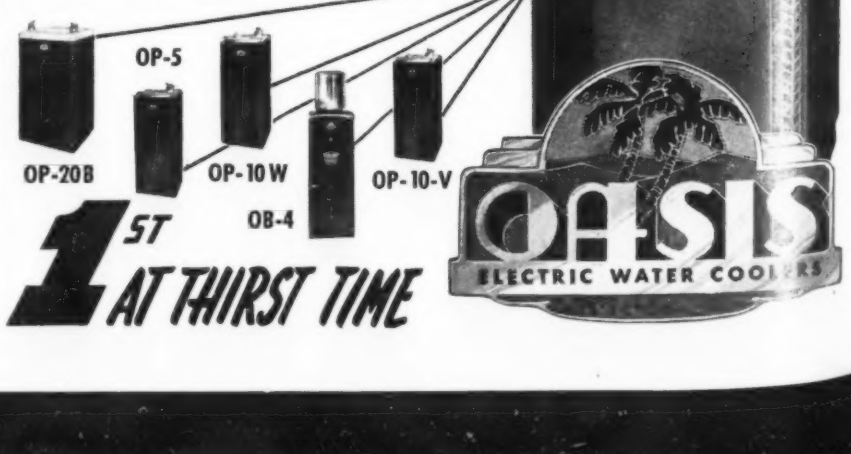


*Every Building—*

**BIG OR LITTLE—IS YOUR PROSPECT FOR**

***BIG OASIS PROFITS***

Your electric water cooler market is getting better all the time! Even small offices and plants, where only four or five people are employed, are demanding the refreshing, healthful advantages of *properly cooled water.* With OASIS Electric Water Coolers, you have the right answer—the *profitable* answer—to every one of these thirst problems. Models and sizes for every need . . . air-cooled and water-cooled types . . . bubbler, glass-filler and combination models . . . bottle-type coolers . . . models for AC or DC operation—*all built by the world's largest maker of electric drinking water coolers!* Write for the full story! *The Ebco Manufacturing Co., 401 W. Town Street, Columbus 8, Ohio.*




**1ST AT THIRST TIME**

# What's New (Cont.)

## Coin Vendor Handles Pre-Packaged Flowers

* * *

OAKLAND, Calif.—Production of a new, self-service, refrigerated flower dispenser which delivers a package at the press of a button, is announced by Frosted Food O'Mat, Inc. of California, 4166 Broadway here.

Following years of research and development, the company reports its plans to start production immediately. With engineering and design features that are said never to have before appeared in the flower dispensing field, the cabinet has succeeded in reducing merchandising to a single operation. Now the shopper sees a beautiful black cabinet with actual flower packaged contents, displayed under fluorescent lighting. The shopper looks at a neat item and price tags, presses a button, and out drops the package selected.

The unit is fully equipped with coin mechanism and maintains, under refrigeration, the desired temperature for flowers.

The new dispenser is known as "The Flower O'Mat." The first cabinet off the production line was built for one of California's leading producers of gardenias. This company has pioneered the production of prepackaged gardenias. Each package contains an individual corsage pin. The company will also pack camellias and other packaged flowers.

They plan on installing the dispensers in airports, railroad stations, department stores, and other strategic locations.

* * *

## Gemco Sales Kit Aids Air Conditioning Estimates

ST. LOUIS—What is termed "a new idea in salesmen's presentations"—using a Remington-Rand Kardex for flexibility and convenience—has been presented to its dealers by General Engineering & Mfg. Co. here.

The leatherette kit, which folds once to a 9-in. by 12-in. size, contains 20 double "kardex" pockets on one side, providing 40 5-in. by 8-in. pages of selling material. Pages can be replaced and re-arranged.

Visible captions at the bottom of the page enable salesmen to find specific material quickly. The kit can be personalized for a particular prospect by inserting any one of 12 alternate pages.

The facing side of the kit holds a pad of Gemco estimating sheets and a Gemco "Coolometer."

## Water Cooler Also Makes 16 Lbs. of Ice Per Day

NEW YORK CITY—A companion model to Coolstream's model CBC-48 bottle type compartment water cooler introduced last January has recently been announced by Coolstream Corp. here.

The new cooler, called the CPC-49, is a pressure type unit. In addition to its function as a water cooler, it also has a two-tray ice cube maker evaporator and space sufficient to hold 24 soda bottles or a supply of biologicals. The compartment is over 1 cu. ft. in capacity.

In the two quick-release ice cube trays, 4 lbs. of ice can be made four times a day, the company claimed. The two doors to the compartment are lined with stainless steel and have locks built into the handles.

The water cooling evaporator is of the instantaneous type supplying enough water for 60 persons, according to the company. The water from the incoming city water line leads directly to the evaporator and then to a paragon type faucet.

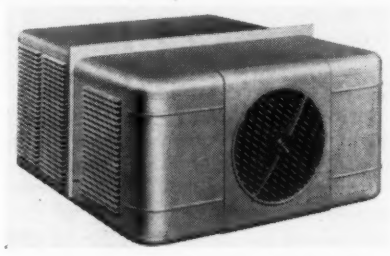
The condensing unit is hermetically sealed. The water cooling evaporator and the ice cube maker are in series and utilize an automatic expansion valve and a thermostatic expansion valve. There are two thermostats in parallel, one on the water evaporator and the other on the ice cube maker.

The cooler is made of heavy gauge steel with recessed base. The finish is said to be baked hammer tone pastel color.

## Fedders-Quigan Window Unit Gets Lighter Finish

BUFFALO—The Fedders ½ and ¾ hp. window-type room air conditioners have recently acquired a "new look."

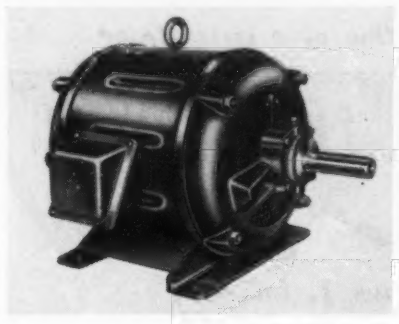
E. A. Bonneville, sales manager of the Unit Air Conditioner Division of the Fedders-Quigan Corp., has announced that a new model with the inside cabinet finished in baked ivory enamel has been designed to catch the eye of users in private residences, apartments, hotels, and hospitals.



"With this new ivory cabinet, we are now able to meet decorators' requirements with a choice of units that will blend harmoniously with either a light or dark motif," Bonneville pointed out.

The newly-designed units, mechanically identical with the standard model finished in bronze and burl walnut, are rated at 5,500 and 8,000 B.t.u., respectively, under standard ASRE conditions, and are available for immediate delivery, the company states.

The baked enamel finish of the new ivory cabinet is resistant to both alcohol stains and cigarette burns.



Wagner 5-hp. ball-bearing motor in 254 frame.

* * *

## Wagner Adapts Dripproof Motors for More Frames

ST. LOUIS — Wagner Electric Corp., which has built dripproof motors in frames 225 and smaller for many years, has adopted the same design for its polyphase motors in the 254, 284, 324, and 326 frames.

They are formed of heavy rolled steel, shaped to accurately center the stator core and to provide passages between the frame and the core for ventilation.

An auxiliary fan, larger in diameter than the armature of the motor, draws in air through the openings in the front endplate, forces it through these passages and out through the endplate openings on the drive end.

Both sleeve-bearing and ball-bearing motors of the new design are completely dripproof when mounted in the normal horizontal position, and, when the endplates have been correctly rotated, these motors are still dripproof in the sidewall or ceiling horizontal positions.


TOP SELLING LINE FOR '49
DAIRY WALL CASES • FREEZERS • SELF SERVICE CASES • FULL VISION CASES • VEGETABLE CASES • SELF-CONTAINED OR REMOTE
COLD-IN
YOUR KEY TO BETTER REFRIGERATION
COLDIN CABINET CO., INC.
2800 Webster Avenue, Bronx 58, N. Y.

Prevent Freezeups... Clogging..Corrosion!
DFN
DEHYDRATORS
• Cartridge Type
• Angle Type
• Non-refillable type
• For Hermetic systems
See your jobber or write
McIntire Connector Co.
Newark 5, N. J.

insist on genuine
Marlo
products
MARLO = HEAT TRANSFER
Since 1925

UNION PACIFIC
Your choice of Streamliner service between Chicago and the PACIFIC COAST

Union Pacific's daily Streamliners provide splendid accommodations for both Pullman and Coach passengers. Superb Dining-car meals . . . restful Club and Lounge cars . . . and a smooth roadbed add to the pleasure of your journey—from beginning to end.

Streamliner "CITY OF LOS ANGELES"
Between Chicago-Los Angeles

Streamliner "CITY OF SAN FRANCISCO"
Between Chicago-San Francisco

Streamliner "CITY OF PORTLAND"
Between Chicago-Portland

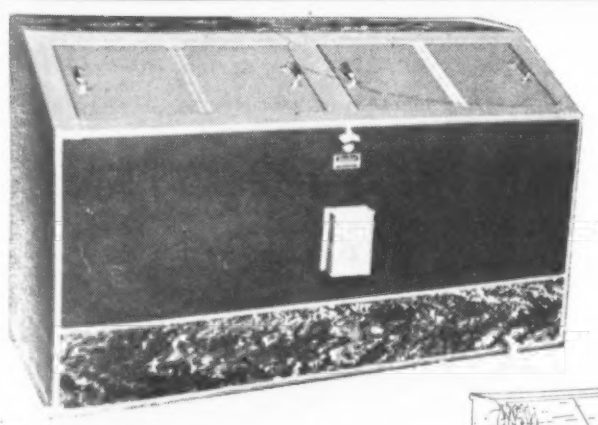
ALL STREAMLINER COACH SEATS ARE RESERVED

* * *

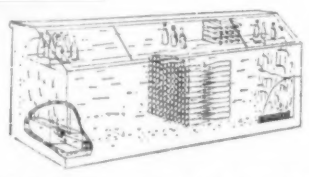
Also overnight service every night between Chicago and Denver on the Streamliner "CITY OF DENVER."

Daily service on the Streamliner "CITY OF ST. LOUIS" between St. Louis and Denver . . . with through cars to the West Coast.

UNION PACIFIC RAILROAD
Road of the Streamliners



Patented
No. 2,442,719



Zero Plates as cold as 6 degrees below
ZERO
With air at BLIZZARD Speed, Cools Beverages faster than any other cooler.
Yet a control keeps the beverages at the exact desired temperature.
34 case complete with ½ compressor unit
List $736.60
Dealers Wanted
Manufactured by
ZERO-PLATE CO.
1400 S. HASKELL AVE.
DALLAS, TEXAS
JOE BOOTH CO.
901 COLLARD ST.
FORT WORTH, TEXAS

The KEY to AIR CONDITIONING

· One of a series from

by James J. LaSalvia

Readers who have any questions regarding the application of air conditioning are invited to write to Mr. LaSalvia, the author of this series, who will be pleased to furnish a complete and detailed answer free of charge. This is another of the services provided by the NEWS.

# Water-Cooling Towers (Cont.)

### SELECTION OF COOLING TOWER

To select a proper size water-cooling tower, the following information is required:

1. Outside design wet-bulb temperature.
2. Gallons per minute of water through the condenser.
3. Gallons per minute of water through the by-pass.
4. Gallons per minute of water through the tower.
5. Gallons per minute of water through the pump.
6. Total resistance or friction head, which the pump must pump against.
7. Size of pipe and valves for the water circuit.

The outside design wet-bulb temperature should be taken generally as the wet bulb used in the heat gain calculations. On systems where the cooling of the water from the tower must be guaranteed, it is advisable to use a wet bulb of 1° F. higher than the design wet-bulb temperature.

The amount of water to be used in connection with towers and how it is to be directed through various parts of the tower system, should be decided at time of designing the system. The amount of water will vary between 3 and 6 g.p.m. for each ton of refrigeration.

### EXAMPLE

To illustrate, let us take the department store system previously described.

The system figures a total of 272,384 B.t.u. or 22.7 tons of refrigeration. Now let us assume to use 3 g.p.m. of water per ton for condensing purposes. This will mean 68 g.p.m. on the cooling tower cycle. This also means that there will be approximately a 10° rise in water temperature through the condenser.

The water is to be cooled to 5° above the wet-bulb temperature of the surrounding air, which will be 75° + 5° or 80° F.

Therefore, water enters the condenser at 80° F. and leaves 10° higher or 90° F.

This water will be taken from tower direct to pump and then to condenser and back to tower. In this case, the full amount of water will pass through the condenser at all times.

Fig. 5—Typical Connections Between Cooling Tower and Condenser

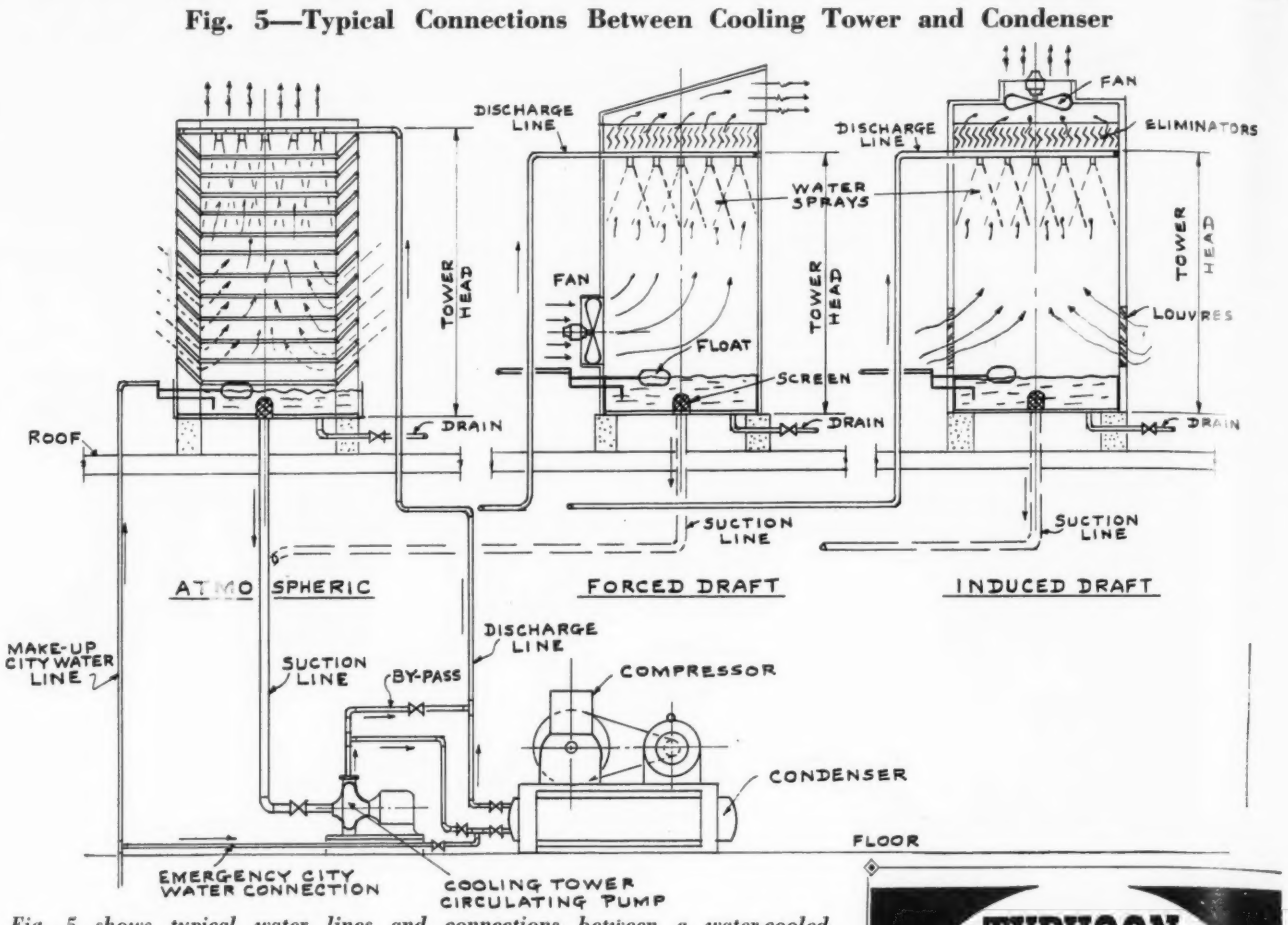



*Fig. 5 shows typical water lines and connections between a water-cooled condenser and three types of towers—atmospheric, forced draft, and induced draft.*

This also means that the tower has to cool 68 g.p.m. from 90° to 80 ° F.

Now suppose that instead of 3 g.p.m. that 6 g.p.m. per ton was used. This means that 136 g.p.m. is on the tower cycle, and if all passed through the condenser, the water temperature rise will be 5° F. So that in this case the water enters the condenser at 80° and leaves at 85° F. The water tower then has to cool the water from 85° to 80° F.

If this is the situation, it would be better practice to take the full 136 g.p.m. from tower to pump at 80° F. From discharge side of pump pass 50% or 68 g.p.m. through the condenser, and let the other 50% or 68 g.p.m. by-pass the condenser, these lines to join beyond condenser.

This will mean that 68 g.p.m. will leave the condenser at 90° F. and the by-pass will remain at 80° F. These two lines are connected beyond the condenser into a common line, which will carry 136 g.p.m. and are taken to the tower at the temperature of 85° F., which is the average temperature of the two lines.

This will also mean lower friction through the condenser, which in turn will permit a smaller motor on the pump. This will keep the operating cost at a minimum.

The pump and tower should always handle 100% of the total water circulated.

### FRICTION HEAD OF SYSTEM

The friction head against which the pump must work is figured as follows:

1. Head through condenser ..... A (In feet)
2. Head at base of water tower (includes head for "lift" from base of tower to nozzles and through nozzles) ..... B (In feet)
3. Friction head through pipe and fittings of entire water cycle ..... C (In feet)

Total head ..A + B + C (In feet)

The head through the condenser can be obtained from the manufacturer whose condenser you intend to use.

The head at the base of the tower can be obtained from the manufacturer whose cooling tower you intend to use.

The friction through the pipe and fittings must be figured by the engineer who is designing the system.

Knowing the gallons per minute and the total head in feet, the pump can be selected from any pump manufacturer's catalog.

### PIPING CONNECTIONS

Fig. 5 shows typical water line connections between water-cooling towers and condenser of compressor.

The connections for the various towers are the same.

*(To Be Continued)*

## 2 Baker Branch Mgrs. Appointed

EVANSVILLE, Wis. — Two new branch managers have been appointed by the Baker Mrg. Co. here, maker of Monitor line of windmills, pumps, and water systems.

Herbert W. Edelman was promoted to branch manager at Kansas City, Mo., and Paul M. Fahey was named to head the company's sales branch at Madison, Wis.

NIAGARA
AEROPASS CONDENSER
FOR LOWER COST REFRIGERATION
...saves cooling water, prevents operating troubles, saves labor. It cuts the operating cost of freezing, cold storage or air conditioning. It reduces power bills because compressors run at lower head pressure. Write for Bulletin 103. Address Dept. AC.
NIAGARA BLOWER COMPANY
405 Lexington Ave. New York 17, N.Y.

insist on genuine
Marlo
products
MARLO = HEAT TRANSFER
Since 1925

TYPHOON
SELF-CONTAINED UNITS
AIR CONDITIONING
For Small Budgets
TYPHOON AIR CONDITIONING
Sizes up to 7-tons.
Product of over 30 years of experience
TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 UNION STREET • BROOKLYN, N. Y

Cut your PRODUCTION COSTS
With
GREENE MOULDING ASSEMBLIES
If you are using plated castings or one-piece stampings for grille work, louvres, decorative trim, etc., Greene Moulding Assemblies can mean real savings for you. With them you get
• Lower cost per unit
• Equal or greater strength
• Reduced weight
• Economical repair or replacement
• High quality appearance
G6
CLIP AND MAIL TODAY
Greene Manufacturing Co., Inc.
1028 Douglas Ave., RACINE, WISCONSIN
☐ Please supply me with complete information on savings possible with Greene Moulding Assemblies
☐ I am attaching blue prints and specifications for quotes
NAME .....
TITLE .....
COMPANY .....
CITY ..... STATE .....

It's still THANKSGIVING at Remington
Sure, you celebrated Thanksgiving day *last* month. But we're still giving thanks every day for the spectacular increase in sales of Remington ALL-YEAR Room Air Conditioners in 1948. We're thanking *you*, the Remington Installing Distributors, whose aggressive promotion and sales effort made our 100% sales increase possible.
For 1949, we're going to show our thanks by offering you *the most complete line of room air conditioners* on the market — a line with such tremendous sales possibilities that every Remington distributor can look forward to bigger gross sales and bigger net profits.
See us at the A.S.H. & V.E. Show in Chicago next month!
Remington AIR CONDITIONING
REMINGTON AIR CONDITIONING
Division of Remington Corp.
CORTLAND, N. Y.
Cables: REMINGAIR

RADIAL UNIT COOLERS by KRAMER
The original Circular Unit. A distinctive Kramer development that has no equal.
Write for Catalog R-125
KRAMER TRENTON CO. Trenton 5, N. J.

WORLD TRADE NEWS

# Southern Brazil's Stable Characteristics Justify Great Efforts By U.S. Producers

**MAIN FEATURES OF THE SOUTHERN STATES**

| States Forming the South | Area (Square Miles) | Population | Persons per Square Mile |
|---|---|---|---|
| Rio Grande do Sul | 110,150 | 3,578,600 | 32.49 |
| Santa Catarina | 31,118 | 1,255,900 | 40.36 |
| Parana | 57,315 | 1,279,700 | 22.32 |
| Iguacu Territory | 25,426 | 104,700 | 4.11 |
| Total | 224,009 | 6,218,900 | 27.76 (average) |

**TEMPERATURE AND RAINFALL IN STATE CAPITALS**

| State Capitals and State | Temperatures (°F.) Daytime Average For Year | Maximum For Year | Minimum For Year | Average Annual Rainfall (Millimeters*) |
|---|---|---|---|---|
| Porto Alegre (Rio Grande) | 66 | 105 | 33 | 1,242 |
| Florianopolis (St. Catarina) | 69 | 97 | 34 | 1,351 |
| Curitiba (Parana) | 61 | 94 | 43 | 1,352 |
| Foz do Iguacu† (Iguacu) | 59 | 93 | 41 | 1,350 |

*25.4 millimeters equals 1 in. †Data are estimated.

**By Eugene Hesz,**
**International Market Analyst**

Why does it appear advisable to discuss one section of Brazil which has only 60% of the population of the state of Pennsylvania, being five times its size?

The south of Brazil is one of the most interesting regions of the country and, in certain respects, even of the South American continent. We have here, again, one of those famous exceptions which appear in every pattern which we try to apply.

In sharp contrast to the typical cultivation of the rest of the country, we find in the southern states, happily, very little of that famous feature: a grand entrance, the beautiful metropolis, forming the pathway to a partly hollow interior.

A number of favorable factors have helped to develop this part of South America into a section with a stable economy, a relatively stable population, and a slow, healthy economic improvement.

In the first place, the climate is better. A glance at the accompanying table will confirm this.

The second factor of importance has been the more or less systematic settlement by races which abhor the speculative cultivation of coffee today, cotton tomorrow, another booming crop the day after tomorrow.

Another great contribution is made by the geological features. In addition to good sub-tropical soil, the formation of the land is ideal for good harvests. Under the surface is a deposit of high-grade iron ore and a great quantity of coal—not very easily mined, but abundant.

The highlands show, of course, the lower temperatures and the only frosts which are found in the four states. The average temperature of the warmest month at Santos is 77.9° F.; at Blumenau, 75.9° F.; at Porto Alegre, 76.5° F.; and at Santa Maria, in the rich Jacui Valley, 76.8° F. The coldest month in Santos averages 66.0° F.; at Blumenau, 58.3° F.; and at Porto Alegre, 56.3° F.

These four southern states have an average rural population of 73%, in contrast to 60% in the region which contains Rio de Janeiro and Sao Paulo. But whereas the population is only 14% of the total population of Brazil, education (schools and school-frequency) is 20%, thus relatively by far greater.

The origin of this higher standard of living is found in the composition of the population. A large part of the settlers are of European origin, and of these, again, a very high percentage are Germans, Italians from the industrious north of Italy, and other hardworking people. In the State of Rio Grande do Sul, for example, nearly 14%, out of a total population of 3,400,000 are of old German stock.

Porto Alegre is the leading Brazilian city from the commercial point of view, after Rio and Sao Paulo. It is the capital of Rio Grande do Sul and has about 400,000 inhabitants. It is rapidly becoming a very modern city.

Curitiba, the capital of Parana, has over 125,000 inhabitants and is connected with Sao Paulo by a good new motor road. The town has a relatively good climate, being at an elevation of 3,000 ft.

The capital of Santa Catarina is Florianopolis (50,000 plus inhabitants). It has an interesting future on account of the coal which Santa Catarina will provide in ever increasing quantities for the new steel mills near Rio de Janeiro (Volta Redonda).

Another busy city in Santa Catarina is Joinville (also 50,000 inhabitants).

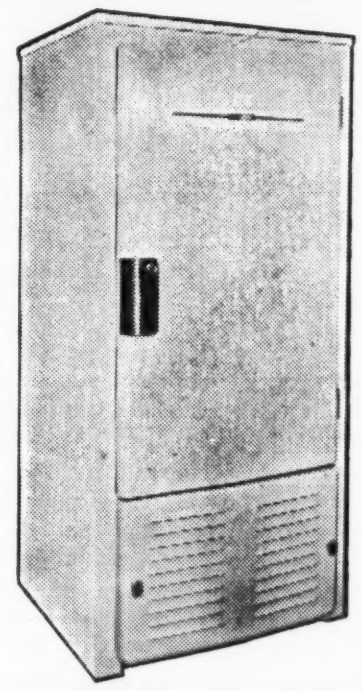
As might be expected in view of the European population, all these cities in the south boast quite a number of breweries, which have a natural demand for refrigeration and air conditioning equipment. The greatest part of the permanent agriculture in the center of these states is a corn-hog industry, and air conditioning is already widely known and used, even in retail stores.

It has been mentioned by this column that the Brazilian government is occupied with far-reaching plans of colonization on the Sao Francisco river, in the east of central Brazil.

Plans of the government also call for immediate relief of the population and food problem. Several such plans have been laid out and already put into operation. These government activities affect land improvements in the state of Rio de Janeiro and, to a very large extent, in southern Brazil.

After reading the foregoing, it will be understood that the more settled climate, the excellent soil, the good tradition of a non-speculative population, and rich ores under the soil justify great efforts in this direction and make success appear certain. It will be good for the American manufacturer of refrigeration equipment to keep on the alert regarding his distribution set-up in the cities of the south.


SANITARY'S NEW
6 cu. ft. and 4 cu. ft. Electric Refrigerators are now available.



No. TE62 Illustrated—
23½"w. x 22¾"d. x 50½"h.

Also Available—Model TE46—
4 Cu. Ft. Size—
23½"w. x 20¾"d. x 41"h.

SANITARY REFRIGERATOR COMPANY
FOND DU LAC, WISCONSIN
ICE REFRIGERATORS FOR MORE THAN 40 YEARS
QUICFREZ FARM LOCKER PLANTS SINCE 1939

Electrimatic
Valves, Driers, Strainers, Charging Lines, Quick Couplers, Forged Flare Nuts and Fittings
Ask Your Wholesaler
Electrimatic
3100 Indiana Ave. • Chicago 16, Illinois
Canada—2023 Addington Ave., Montreal

Get Genuine Wagner Motor Repair Parts

When repairing a Wagner Motor, be sure to use genuine Wagner motor parts. Get them now from your Wagner distributor. Name on request.

WRITE FOR MU-40 CATALOG . . . M47-25
Wagner Electric Corporation
ESTABLISHED 1891
6471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS

THE MOON ISN'T MADE OF GREEN CHEESE . .
No, and reliable refrigeration equipment isn't made from sky high claims of "field leadership." Sound research, advanced design and competent, experienced workmanship are required to make each unit progressive in design and reliable in operation. The La Crosse Cooler Complete Line (partially illustrated) has followed and pioneered these manufacturing principles.
The LA CROSSE COOLER CO.
LA CROSSE WISCONSIN

"Easily understandable---
and a great aid to service engineers"

REFRIGERATION PROBLEMS AND THEIR SOLUTION

*In two volumes, J-1 and J-2*

by Paul Reed

Handy, practical, reference information for the refrigeration service engineer, "Refrigeration Problems and Their Solution" is written and illustrated so as to be of interest to salesmen, users, and others who want a fuller knowledge of refrigeration.

You'll like the way Paul Reed has organized his material . . . and he writes clearly, making these books easy to understand and a pleasure to read. And because Paul Reed has such a wealth of practical knowledge of refrigeration, and years of experience behind him, you'll find reading these books the next best thing to a person-to-person chat about your refrigeration problems. Conveniently cross-indexed for instant use, "Refrigeration Problems and Their Solution" can provide "the missing link" in your search for authentic advice on "how to make it work."

*264 pages.* *6 by 8½* *$1.00 ea.*

*Vol. 1*

| Chapter No. | Subject | Page No. |
|---|---|---|
| 1 | Measurement of Temperature | 1 |
| 2 | What Heat Is; How it May Be Measured | 6 |
| 3 | Temperature-Pressure Relationship | 11 |
| 4 | Temperatures, Pressures, and Heat Contents In the Compression Cycle | 15 |
| 5 | Automatic Expansion Valves | 23 |
| 6 | Thermostatic Expansion Valve and Superheat | 28 |
| 7 | The Capillary Tube | 34 |
| 8 | The High-Side Float Valve | 39 |
| 9 | The Low-Side Float Valve | 42 |
| 10 | Rise and Fall of the Low-Side Float | 46 |
| 11 | Flash Gas | 48 |
| 12 | Heat Exchangers | 53 |
| 13 | Oil-Refrigerant Mixtures | 57 |
| 14 | Factors In Pressure Control Settings | 62 |
| 15 | Effect of Altitude on Controls, Valves | 65 |
| 16 | Air Circulation for Air-Cooled Units | 68 |
| 17 | Relationship Between Refrigerant Pressures and Air Temperatures | 72 |
| 18 | Determining the Heat Leakage | 76 |
| 19 | Determining the Product Load | 80 |
| 20 | Miscellaneous and Service Loads | 84 |
| 21 | A Problem In Beverage Cooling | 89 |
| 22 | Multiple Systems | 91 |
| 23 | Balancing the Units In a System | 99 |
| 24 | Fur Storage—Use of Variable Speed Units | 102 |
| 25 | Varying the Capacity of a Condensing Unit | 105 |
| 26 | Loading of Condensing Unit Motors | 120 |
| | Index | 123 |

*Vol. 2*

| Chapter No. | Subject | Page No. |
|---|---|---|
| 27 | Water-cooled Condensers | 123 |
| 28 | The Evaporative Condenser | 129 |
| 29 | Compressor Shaft Seals | 138 |
| 30 | Piston Head Clearance | 158 |
| 31 | Defrosting of Evaporators | 161 |
| 32 | Proper Handling of Compressor Oil | 166 |
| 33 | Changing from "Freon-12" to Methyl Chloride | 169 |
| 34 | Charging Refrigerant Into the System | 173 |
| 35 | Conditions Affecting Food Preservation | 176 |
| 36 | Humidity and Air Circulation | 179 |
| 37 | Storage Temperature Not for Freezing | 189 |
| 38 | Refrigeration and Handling of Beer | 192 |
| 39 | Carbon Dioxide In Refrigeraiton Work | 195 |
| 40 | Use of Gauges vs. Guessing | 199 |
| 41 | Use and Care of Tools | 201 |
| 42 | Recording Suction Pressure Gauge | 205 |
| 43 | Simple, Obvious Causes of Troubles | 213 |
| 44 | How Preventive Maintenance Is Used | 215 |
| 45 | Control of Moisture In Refrigeration Units | 218 |
| 46 | Finding & Preventing Refrigerant Leaks | 221 |
| 47 | Care and Treatment of V-Belts | 227 |
| 48 | Lapping Seals, Plates, etc. | 230 |
| 49 | Service Chart | 233 |
| 50 | Service Chart | 238 |
| 51 | Service Chart | 245 |
| 52 | Service Chart | 252 |
| | Index | 258 |

BUSINESS NEWS PUBLISHING CO., 450 W. FORT ST., DETROIT 26, MICH.

FOR MEN WHO WANT TO GET AHEAD

# The Marshal's Baton

Are you impatient to get ahead? Are you dissatisfied with your present earning power? This book will tell you how to leap-frog ahead.

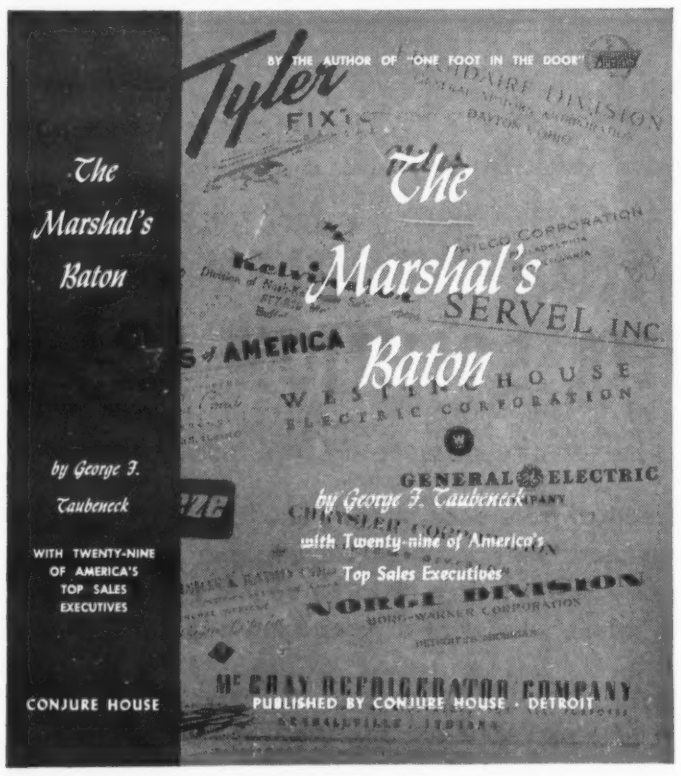
NOW, for the first time, you *can buy* a reader's digest of tested sales management wisdom, and learn how to put this distilled knowledge to good use in your own endeavors to rise in your profession and make more money.

Every chapter of "The Marshal's Baton" has been edited and commented upon by one of America's leading sales executives. These top-notchers give *you* the vast benefit of their hard-won experience in their contributions to this big book.

Their own priceless observations will tell YOU how to make more money and be promoted to a bigger job. All you have to do is read this book, then apply the sales-building formulas it took them years to develop to your own problems.

"The Marshal's Baton" is *the* compendium of practical, usable sales management "know how" for every eager-to-get-ahead salesman, dealer, distributor, field man, and junior executive.

For really great reading, with assured profit and advancement to *you*, order your copy of "The Marshal's Baton" TODAY.


BY THE AUTHOR OF "ONE FOOT IN THE DOOR"
Tyler
The Marshal's Baton
by George J. Taubeneck
WITH TWENTY-NINE OF AMERICA'S TOP SALES EXECUTIVES
CONJURE HOUSE
The Marshal's Baton
by George J. Taubeneck
with Twenty-nine of America's Top Sales Executives
PUBLISHED BY CONJURE HOUSE · DETROIT

## WHO *Some of These Leaders Are*

**Howard E. Blood,** *President and General Manager, Norge.*
**Louis Ruthenburg** *President, Servel.*
**Frank Pierce,** *President, Dearborn Motors; former Vice President, General Motors.*
**Jerry Tyler,** *late President, Tyler Fixture.*
**Henry Burritt,** *President, Eureka Williams.*
**T. K. Quinn,** *President, Monitor.*
**C. J. Lawson,** *Vice President in Charge of Sales, Kelvinator.*
**W. Paul Jones,** *Vice President, Philco.*
**A. M. "Mike" Sweeney,** *Manager of Sales, General Electric.*
**George S. Jones, Jr.,** *Vice President and General Sales Manager, Servel.*
**Phil Bratten,** *General Sales Manager, Frigidaire.*
**Dan A. Packard,** *Sales Manager, Kelvinator.*
**G. H. "Rock" Smith** *Vice President and General Manager, Deepfreeze.*
**Lee H. D. Baker,** *Sales Manager, Admiral.*
**Lee A. Clark,** *Assistant General Sales Manager, Frigidaire.*
**Ray W. Turnbull,** *Vice President, General Electric.*
**T. J. Newcomb,** *General Manager, Westinghouse Appliance Div.*
**John Garceau,** *Sales Promotion Manager, Farnsworth.*
**E. A. Terhune,** *President, General Vending Machine.*
**J. Gilbert Baird,** *Promotion Manager, Westinghouse.*

**CONJURE HOUSE**
**Div. BUSINESS NEWS PUBLISHING CO.**
**450 W. Fort St., Detroit 26, Mich.**

**Please ship ..... copies of "THE MARSHAL'S BATON" at $5.00 per copy.**

☐ **CHECK ENCLOSED*** ☐ **BILL US**

Name .....
Address .....
City ..... Zone ..... State .....
**Books will be sent postpaid if check accompanies order.* 12-27-48


# Vague Points In Reg. W Are Interpreted by Administrator; Excess Down Payments, Delivery Delays, Records Explained

CHICAGO—A series of interpretations of Regulation W provisions was recently passed on to its members by the National Appliance and Radio Dealers Association.

The association said that these interpretations were given it by the administrator of Regulation W. As printed in the group's weekly news bulletin, they include:

*Excess down payment*—A purchaser who has made a down payment in excess of the amount required by the Regulation may not later have the excess applied as part of the down payment on another listed article.

*Instalments in decreasing amounts*—Sections 3(b) (1) and 4 (c) (1) of the Regulation are worded in the alternative. Consequently, a first instalment of $65, for example, may be followed by 14 instalments of $23.

*Ballon note*—A note which calls for 11 equal monthly payments, followed by one larger payment, meets the requirements of the Regulation if there is an express agreement that when the twelfth payment falls due, only a portion of it will be paid on that date and the rest will be refinanced into three monthly payments in such a manner that the net result will be 15 substantially equal monthly payments.

*Small deficiencies*—Deficiencies in down payments, even in small amounts, are not permissible, except as permitted by Section 6(f) of the Regulation.

*Delay in delivery*—If in an instalment sale subject to the Regulation the article sold is not going to be delivered until a date subsequent to the date of the contract, the maximum maturity may be calculated from the date of delivery and the first instalment may fall due one month after the date of delivery with, of course, the usual option under Section 6(b) of making the 15-day adjustment permitted by that Section with respect both to the maximum maturity and the date of the first instalment.

*Record of Instalment Sale*—The "Record of Instalment Sale" described in Section 6(c) need not be on a single sheet of paper and need not use the terminology used in that section. The cash price may be shown as a total without itemizing taxes and accessories, but the accessories must be identified.

*Agreement to convert charge account*—The sale of a listed article in a charge account with an agreement or understanding that the credit will later be converted into an instalment contract violates Sections 3(a) and 6(i).

*Side loan to make down payment*—The words "any other extension of credit" in Section 6(j) include but are not confined to other extensions of *instalment* credit. Section 6(j) refers to the down payment required by the Regulation.

Accordingly, if a seller asks for a larger down payment than is required by the Regulation, this subsection (j) would not prevent the lender from lending the difference between the down payment required by the Regulation and the down payment required by the seller.

*Lease with option to purchase*—A lease with an option to purchase is an "extension of credit" within the meaning of the Regulation, and the lessor should obtain the down payment and periodic payments which would be required in the event of a sale.

If the lessee decides not to exercise his option to purchase, the registrant may return to him the difference between these payments and the amount of rental agreed upon. Of course, the Regulation does not apply to a bona fide rental without an option to purchase.

*Consumer-violator*—A consumer who knowingly violates or induces violations of the Regulation may subject himself to criminal penalties.

*Listed article installed in house*—Section 7(g) (1) exempts a loan to purchase a house even if the house is one in which certain listed articles had previously been incorporated. However, this section does not exempt a mortgage loan to be used to purchase a listed article.

In view of Section 6(d), an extension of credit which combines an exempt credit such as one to repair a house as referred to in Section 7(g) (2) and a credit subject to the Regulation such as one to finance a listed article cannot exceed in amount the cost of the repairs plus the cost of the listed article minus the down payment required thereon by the Regulation, and the instalments in which the credit is payable must be sufficiently large to repay the balance of the cost of the listed article within the maturity specified for the listed article in Part 2 of the Supplement to the Regulation.

*Calculating down payment on other articles*—When an article is traded in on a listed article other than an automobile, Part 5 of the Supplement requires that the value of the article traded in (or the value of the purchaser's equity in it) be deducted in order to ascertain the *net price* to be used in calculating the down payment or loan value of the article being purchased.

However, Part 5 of the Supplement does not prohibit the seller from taking back an article which is unsatisfactory to the purchaser if the seller allows the full purchase price as a credit against the price of the new article.

Of course, if the price of the new article in such a case is inflated in order to offset depreciation in the original article, the transaction would violate Part 5 of the Supplement and Section 6(i).

# Farmers Urged To Raise Living Standards, Modernize Homes To Aid the Country

WASHINGTON, D. C.—Farmers would do themselves and the country a greater service by investing their boom-time profits in better living for their families than by buying more land at present-day inflated prices.

That advice was given to farmers by the agriculture committee of the National Planning Association in a recently published pamphlet entitled, "Can Farmers Afford to Live Better?"

Pointing out that how the farmer spends his extra income is a matter of national concern, the committee said:

"If farmers built the approximately 2,000,000 new farm homes they need; repaired another 2,000,000 that need it; put in such improvements as electricity, running water, plumbing, refrigerators, and other household conveniences; if they bought modern farm equipment they need; then they would come into the market as substantial consumers of industrial products, which in turn would have important implications for full industrial employment."

Dr. Lowry Nelson, professor of sociology at the University of Minnesota, who wrote the pamphlet for the committee, stated, "Many farm people of the U. S. are in better financial condition than they have ever been. Their indebtedness is greatly reduced, and their incomes have been high. They have the financial ability to pay for improvements. . . ."

Demonstrating that farmers as a group have far fewer conveniences than city dwellers, Dr. Nelson quoted a national survey conducted in 1947 that indicated that only 38% of farmers have an electric refrigerator, 43% have an electric washing machine, 25% have an electric vacuum cleaner, 12% have an electric range, 12% have an electric hot water heater, and 7% have an electric sewing machine.

"From the standpoint of national welfare," the pamphlet concluded, "the farmer with $5,000 in the bank should do this:

"Fix up the farm and home so far as he can buy equipment that is not scarce and high priced.

"Put the balance of the money in U. S. Savings Bonds.

"Cash in those bonds and buy more equipment as prices in that field start to weaken.

"Fortunately, this also happens to be the course of action that will do the farmer the most good, too."

## Man Who Isn't Houdini Closes Appliance Store

ELMIRA, N. Y.—Horton's Paint Store, 307 Broadway, announced it is closing its appliance store at 53 S. Main St. and disposing of a $25,000 stock of major and small appliances. The proprietor explained:

"To my friends and customers. I've made a mistake—I can't be in two places at once. I can't operate two stores and give you proper service.

"This, in addition to the lack of dependable help and spiraling appliance prices has forced me to sell out all appliances and close my S. Main St. store."


**ADD DOLLARS TO YOUR PROFITS . . .**

**With one of the most complete Commercial Refrigeration Lines in the industry.**

FOGEL Display Cases, Freezers, Coolers, and Refrigerators are designed to SELL! Designed to increase your *"Profit Dollar."*

Increase your Sales and Profits by selling equipment known the world over for its *"Advanced Styling," Dependability,* and *Fine Craftsmanship.*

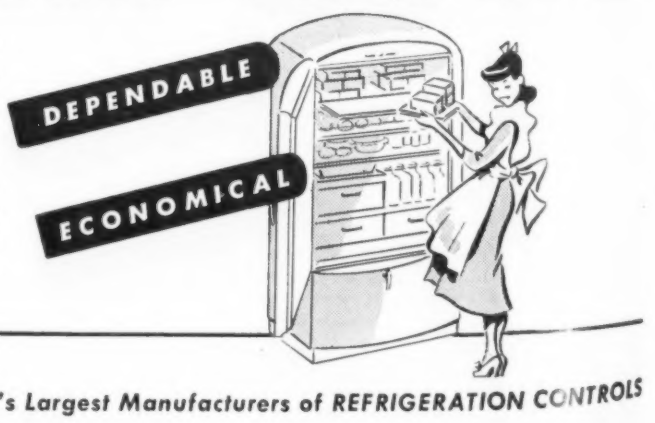
Write, Wire, or Phone, for complete information concerning the FOGEL "Sales Franchise." *DO IT TODAY and Add Dollars to Your Profits.*

**FOGEL REFRIGERATOR COMPANY**
5400 Eadom St.—Phila. 37, Pa.
Phone JE 5-8300—Cable "FOREFCO"



**Ranco . . . ELIMINATES CALL-BACKS—INCREASES PROFITS**

RANCO Controls are found in more original household refrigeration installations than any other control made. Servicemen rely on Ranco, too, for the dependable, accurate and trouble-free operation that eliminates expensive call-backs and increases their profits on every replacement job. More than 15,000,000 Ranco Controls now in use attest the ability of Ranco-built Controls to meet your most exacting requirements. Check with Ranco first.




**Ranco Inc.**
COLUMBUS 1, OHIO
World's Largest Manufacturers of REFRIGERATION CONTROLS

# Careful Figuring of Inlet Temperature, Peak Load Avoids Over-Taxing Water Cooler

CHICAGO—Overloading is the chief cause of service calls on water coolers, and generally, overloading is much more prevalent in liquid cooling applications than in other uses of refrigeration, stated Earl Jennings, service manager of Temprite Products Corp., in a talk given before the eleventh annual meeting of the Refrigeration Service Engineers Society.

Proper selection of the water cooler and condensing unit is relatively simple in comparison with selecting equipment for other types of refrigeration applications," Jennings said.

### *How To Figure Job*

"In any given application of water cooling, you merely have to know the number of gallons required at the desired temperature and the inlet temperature of the water. From this you compute the B.t.u. load for selecting the condensing unit with the following formula:

"Gallons per hour x temperature difference x 8.3 = B.t.u. hourly load."

As an example, Jennings cited the application of cooling 100 g.p.h. from 80° F. inlet temperature to 40° F.:

100 x 40 x 8.3 = 33,200 B.t.u.

"From this we can select the water cooler and the condensing unit, using the manufacturers' specifications tables.

"Why is it then that improper units are selected?" Jennings remarked.

"Sometimes," he explained, "the factor of peak load is not considered in arriving at the gallons per hour water figure. A peak load lasting only five minutes can cause lots of trouble.

"You must remember, also, that the average water faucet delivers between 50 and 100 gals. per hour, but to cool 30 gals. per hour from 80° to 40° would require a 1-hp. condensing unit. That, incidentally, is a good rule of thumb figure."

In determining peak load operating conditions, Jennings suggested such a method as finding out the number of glasses to be drawn in succession and then using this in figuring the peak load.

"Another factor in overloading which can cause service difficulties is that the temperature difference between inlet and cooled water is sometimes incorrectly used.

### *Inlet Water Is Warmed*

"The water as it enters the building may be lower in temperature than the water fed to the cooler because the latter has been standing in the building for several hours. This largely occurs in big water-cooling jobs, and in these, consideration should be given to insulating the water lines and water storage tank," Jennings declared.

Other service problems can arise where long runs of refrigerant lines are employed, he said, pointing out that these will cut suction pressure. The latter, of course, should be accurately determined for selecting a condensing unit.

Several models and various methods of water cooling were shown by Jennings in the course of his talk, such as the conventional self-contained water cooler of the pressure-bubbler type.

"This type will operate in such extremes at 110° F. ambients and incoming water of 100°," he said. "The principal maintenance required is to keep the condenser free from dirt. In some applications, such as factories, where there can be a serious dirt problem, it may be advisable to use water-cooled condensing units on these models."

A pre-cooling arrangement whereby the cold waste water cools the incoming water is invariably employed on such models, he added.

### *Some Lose Pre-Cooling Effect*

"Glass-filling outlets on water coolers, however, will reduce the cooling capacity to 45% of that of a standard bubbler type, because the effect of pre-cooling is lost. All of the water is drawn off in glasses and little or none remains to be drained through the pre-cooler," he explained.

Discussing multiple systems where several fountains are cooled by one condensing unit, Jennings pointed out that a frequent cause of service complaints with this type results from having too large an orifice in the bubbler.

"Rate of water flow in the bubbler depends in part on the orifice. Usually 3/16 in. is a good size, which generally results in a flow of 30 gal. per hour. In some bubblers which have not previously been cooled the orifice is so large that they use 75 g.p.h.

"When this system is converted for cooling, the remedy is to bush the bubbler orifice down to 3/16 in."

### *Bleeding Off 'Flash Gas'*

Another service problem encountered with remotely located low sides in water-cooling applications is flash gas occurring in liquid lines, particularly in long risers, Jennings said. For this he suggested the following solution:

"A thermostatic expansion valve can be installed in the liquid line above the point where it leads into the evaporator. Outlet of the valve is teed into the suction line so that a by-pass circuit is established. The feeler bulb of the expansion valve is placed on the by-pass before it connects with the suction line.

"Flash gas at the top of the liquid line would pass through the expansion valve and through the by-pass line to the suction line, thereby bleeding off the flash gas. Because the gas is warm, the expansion valve would remain open.

"When liquid refrigerant, starts through the valve and by-pass it will cool the feeler bulb, causing the expansion valve to close and thus force the liquid refrigerant into the water-cooling evaporator because the by-pass is closed."

In this connection Jennings pointed out that "refrigerant lines should always be separated as far as possible from high temperature heat sources."

Jenning's suggestion about using the auxiliary expansion valve to solve the flash gas problem aroused considerable interest among the RSES members present.

It was emphasized that this problem occurs chiefly on high lift applications.

### *High Head Pressure Problem*

"Suppose," Jennings explained further, "that the evaporator is 75 ft. higher than the condensing unit. On such a run 'Freon-12' probably loses more than ½ lb. pressure per foot of rise. And if the pressure drops enough, flash gas will start to form."

One serviceman suggested that this trouble could be avoided by keeping the system head pressure up.

"Get a larger motor if necessary," he said.

To this Paul Reed, who as RSES educational director chairmanned this session, pointed out that a larger motor and higher head pressure would increase both first and operating costs of the system.

Discussing other types of systems, Jennings commented on the cooled water circulating type wherein water is cooled in the basement and then circulated by a pump to the bubblers or glass fillers.

### *Consumption Data Vital*

"These were more popular some years ago, but now more mechanical refrigeration systems are being used. It is occasionally necessary to replace the condensing unit on such job, however, and in doing this very often proper consideration is not given to peak load operating conditions.

"Before replacing the condensing unit or water cooler on such a circulating system, collect all possible data on water consumption from the water bills," suggested Jennings, adding that it may be discovered that the plumbing hookup is wrong.

"For peak loads lasting an hour or more, of course, it is necessary to have a storage tank in a circulating system.

" 'Dead-end' systems, which are frowned upon by many, actually are efficient water-cooling systems where there is a continuous use of water, such as in a department store," he went on.

In commenting on bottling plant water-cooler installations, Jennings pointed out that "it is often necessary to carefully regulate the flow of water through the cooler because the cooler and/or the condensing unit may not be exactly sized to the requirements of the load.

"On a big installation such as this, the water cooler would be selected as close to the estimated load as possible, and then the condensing unit would be selected to match the load and cooler as closely as possible. The one may possibly be slightly over the actual load, the other unit perhaps a little under, so it is necessary to make adjustments in the water flow," Jennings explained.

"In wine-cooling applications, it must be remembered that the cooler will have only 50% of the capacity it would have if it were cooling only water.

### *Wine Sugar Slows Cooling*

"Wine has sugars, etc. in solution, which make it have more skin effect. This means that the wine on the surface of the coolers moves more slowly than that in the center. Provision must also be made," he cautioned, "for removing the cream of tartar which builds up on the coils of a wine cooler."

Following the formal presentation of the paper, several minutes were devoted to the subject of using an oil separator, when Jennings was asked if he recommended its use on "all 'Freon' or methyl systems."

"I would recommend an oil separator for any low-side or high-side float system," Jennings replied, and after further discussion Paul Reed added his comments that "a high side oil separator doesn't remove all the oil.

"The amount of oil removed," Reed asserted, "varies so much with the temperature of the room and other factors that sometimes the oil separator causes more trouble than it cures.

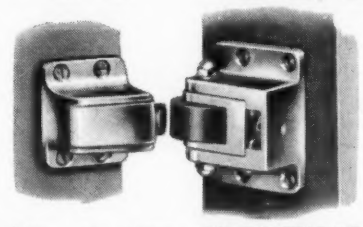
"I have seen jobs where oil separators fed back so much refrigerant that the condensing unit was torn up in six to eight hours' time."

Cross section view showing ample grip-space provided on lever handle. Can be used for either right or left doors.

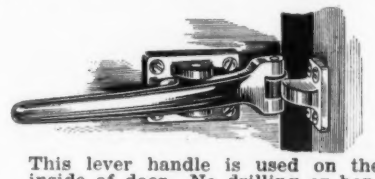
KASON

EDGE MOUNTED LATCHING DEVICE FOR SUPER-FREEZER, WALK-IN DOORS

The K-198 Super Freezer Latch consists of two, KASON ROLLO-WEDGE SEALS, which latch the door securely on top and bottom, an edge-mounted lever for the outside of the door and an inside release lever. These form a perfect, air-tight closure for the large super-freezer doors and provide a simple mechanism for entrance and egress. The edge-mounted hardware of K-198 can be universally adapted to doors of 5" offset or higher. Installation is extremely simple.



Two of these ROLLO-WEDGE SEALS are used to latch the door on top and bottom. They seal the door in **perfect, air-tight closure**—yet their hold is easily released by the lever handles. The ROLLO-WEDGE SEALS are equipped with Kason Micrometer Strikes which can be automatically adjusted to perfect offset.



This lever handle is used on the inside of door. No drilling or boring of holes needed for installation.

WRITE FOR DESCRIPTIVE LITERATURE

KASON HARDWARE CORPORATION
127-137 WALLABOUT ST.
BROOKLYN 6, N. Y.



insist on genuine Marlo products

MARLO = HEAT TRANSFER Since 1925



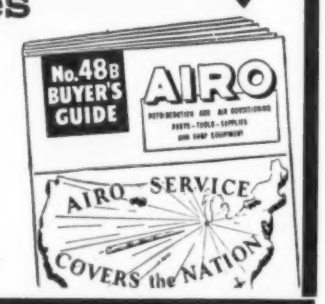
REFRIGERATION AND AIR CONDITIONING
UNITS • PARTS • TOOLS • SUPPLIES

NEW Latest Prices Wanted Lines

*Write Today for Your Copy*

Why spend valuable business hours and car expense on trips to buy parts? Get fast low-cost delivery from our large, complete stocks. Airo serves buyers in 48 States and overseas.

Wholesale Only
Please Write on Your Letterhead




AIRO SUPPLY CO.
2732 N. ASHLAND AVENUE • CHICAGO 14, ILL.



VIRGINIA REFRIGERANTS

"V-METH-L" Methyl Chloride

"EXTRA DRY ESOTOO" Liquid Sulfur Dioxide

consistently pure
consistently sure

VIRGINIA Refrigerants

West Norfolk • New York • Boston • Detroit

VIRGINIA SMELTING COMPANY, WEST NORFOLK, VA.

*Distributors for Kinetic's "Freon" Refrigerants*

# Guide to Stories Which Ran In the News In '48

*Editor's Note:* The following is a listing of some of the stories and articles appearing in AIR CONDITIONING & REFRIGERATION NEWS during the year 1948, classified by general type of subject matter.

In no sense, however, can this list be construed as a complete index of material that has been published in the NEWS during the past 52 weeks. Rather, it is a compilation of the headlines or titles of the more significant articles to which readers may wish to refer.

Those who desire back copies of the issues in which a particular article or articles are listed, may order them at the standard price of 20 cents per copy. However, we are out of stock on a number of issues and thus can't guarantee to fill all orders. See box on opposite page for list of available issues.

## AIR CONDITIONING

Greater Profit Seen If Air Conditioning Is Installed In Commercial Greenhouses—p. 51, Jan. 26.

Increasing Market for Heat Powered Air Conditioners Seen by Berry In ASRE Talk—p. 14, April 19.

CIO Textile Union To Demand Air Conditioning of Mills—p. 14, May 17.

Air Conditioning Switchboard—Panel Controls Temperature, Humidity In 17 Parts of Store, Permits 'Concentrated Cooling'—p. 10, May 24. See also p. 26, June 28.

18-Story Cooling Job Finished In 30 Days—p. 1, May 24.

Prospect Selection and Five A's of Air Conditioning Discussed at Indoor Comfort Forum for Dealers—p. 12, June 14.

Use of Smaller Diameter Tubes and Closer Spacing of Thinner Fins Results In More Compact Conditioners—p. 24, June 14.

By Venting Odors from Basement Repair Shop, Air Cooling System Boosts Output—p. 4, June 21.

'Air Recovery' Setup In Air Conditioning System Saves Theater $3,000—p. 21, June 21.

Factors In Design and Maintenance of Evaporative Condensers Outlined—p. 22, Aug. 1.

New Cincinnati Hotel (Terrace Plaza) and Store Buildings Air Conditioned To Handle Varied Needs—p. 26, Aug. 2.

'Sell 'Em In the Winter, Have the Right Answers All of the Time' (How To Sell Room Air Conditioners)—p. 31, Aug. 2.

Negative Air Pressure, Suction Exhaust, Water Curtain Combined In System To Eliminate Fire Hazard from Open-Type Escalators—p. 15, Aug. 9.

'Therapeutic' Air Conditioning System In Hospital Features Individual Room Controls—p. 26, Aug. 9.

New Forum, Inc. Drive-In Restaurant In Kansas City Installs Air Conditioning In Both Kitchen, 70-Guest Dining Room—p. 12, Aug. 23.

Using Doctors To Help Sell Air Conditioning Units Is Just One Idea That Has Paid Dividends to Frank Berger—p. 6, Aug. 30.

Central Air Conditioning Plant To Supply Shopping Area In Multi-Million Dollar Project—p. 8, Sept. 6.

Acoustical Ceiling Replaces Ordinary Vents for Air Conditioning In International Mart—p. 21, Sept. 27.

Utility Develops Portable Manhole Conditioners To Cut Humidity In Laying 138,000-Volt Cable—p. 27, May 10.

Copper Mine Air Conditioning Will Be Expanded; Water Supply Poses Difficult Problems—p. 16, May 24.

South African Tobacco Factory Air Conditioning Installation Includes Three Separate Systems for Comfort, Process Cooling—p. 10, Oct. 11.

Free Home Demonstrations with Miniature Working Model of Air Filter Enables Salesmen To Move 14 Units In 7 Days—p. 10, May 24.

Dealers Told To Get 'Money Out of Room Air Conditioner Sales Fast'—p. 1, June 21.

Field Man Lists Points To Check Before Installing Packaged Air Conditioners—p. 21, June 21.

Excise Tax Doesn't Cover Room Cooler Replacement Units—p. 1, Sept. 6.

Independently-Powered Railroad Train Air Conditioning System Permits Greater Use of Engine Drive for Pulling—p. 20, Feb. 16.

Crane Cab Cooling—Noxious Gases, 140° Cab Prove Challenge To Design of Self-Contained Unit—p. 25, March 29.

Code on Attic Fans Suggests Requirements for Satisfactory Installations In Homes (Propeller Fan Manufacturers Association)—p. 18 (Text, p. 19), Jan. 12.

New Method of Determining Moisture In Air Said To Be More Accurate, Simpler—p. 23, Jan. 12.

Standard Methods, Equipment Cut Down Variables Occuring In Air Filter Tests—p. 35, April 5.

Air Cycle Refrigeration Challenges Engineers To Develop Modern Uses—p. 13, June 21.

D. C. Suburbs Are Restricting Use of Cooling Water—p. 1, Oct. 4.

Air Sterilization Technique May Get Boost with New Control Equipment—p. 17, Oct. 4.

Aluminum Ducts OK'd by Fire Underwriters—p. 19, Oct. 25.

Textile Mill Air Conditioning—p. 20-21, Nov. 15.

Does Your Cooling Tower Perform the Way It's Supposed To? Here's a Way to Check—p. 22, Nov. 22; p. 23, Nov. 29; p. 28, Dec. 6.

Ideas for Sales of Air Conditioning, Commercial Equipment (NARC forum)—p. 10-12, Dec. 13.

### HEAT PUMPS

Heat Pump Needs Higher Coefficient of Performance; Is Not a Reverse Cycle System, Prof. Penrod Declares—p. 20, Jan. 19.

Finding Source of Sufficient Heat Cited as Big Problem Faced by Residential Heat Pump—p. 48, Jan. 26.

There's a Definite Future for Heat Pump, But Much Engineering Remains To Be Done—p. 16, March 1.

Heat Pump Using Water Storage for Peaks Proves Value In Utility Test Installation—p. 29, April 5.

Utility Installs Experimental Heat Pump In Hope, R. I., To Gain Operating Data—p. 15, May 31.

Chicago Utility To Work Out Kinks In Operation of Heat Pump for Six-Room House—p. 8, Dec. 20.

### STATISTICS

Sales & Users of Commercial Units, Conditioning Shown In Detroit Data—p. 28, Jan. 26.

Where Air Conditioning Was Installed In City of Chicago In 1947—p. 28, Sept. 13.

Air Conditioning & Commercial Refrigeration Shipments:
Third Quarter—1947—p. 52 & 54, Jan. 26.
Fourth Quarter—1947 p. 23-23, April 12.
First Quarter—1948—p. 22-23, July 19.

### QUESTIONS AND ANSWERS

Q. Can I Adapt Theater Air Washer System To Handle High Humidity Loads?
A. Not Without a Definite Amount of Refrigeration Equipment—p. 19, Aug. 16.
Q. How Does One Determine Cooling Load In High Ceiling Places?
A. You Can Calculate Separate Heat Gain for Areas Above and Below Outlets—p. 31, Oct. 4.
Q. How Should the Differential Temperature Difference Be Computed?
A. La Salvia Explains Vital Design Calculations for Air Cooling Systems—p. 17, Dec. 6.

## ASSOCIATIONS

ACRMA—Revised Refrigerant Book Adds Ammonia Data—p. 24, Oct. 24.

ASRE—Reports of spring meeting at Swampscott, Mass.—p. 1, June 7; p. 23, 24, 36, June 14; p. 13, June 21; p. 28, June 28; p. 25, July 5.

ASRE—New Data Section Covers Freezing of Ice Cream—p. 12, Feb. 9.

ASRE—ASRE Data Section Covers Ammonia Unit Operation—p. 5, April 5.

ASRE—Data on Freezing Eggs Given In Pamphlet—p. 26, June 7.

ASRE—Tract Covers 'Refrigeration of Lemons and Grapefruit'—p. 13, Sept. 13.

ASRE—ASRE Booklet Describes Activated Carbon Use—p. 11, Sept. 27.

EEI—Utilities Planning Big Drive To Spur All-Electric Kitchen—p. 1, April 12.

EEI—Utility Men Hit Failure To Push Electrical Living—p. 1, April 19.

Electrical Assn. of Philadelphia—Philadelphia Shows the Way In Cooperative Promotion on Commercial Refrigeration and Air Conditioning—p. 32, June 14.

Electrical Assn. of Philadelphia—Philadelphia Association Cooperative Home Freezer Campaign Gains Impetus from Convention-Type Sales Meeting—p. 12, Aug. 2.

Rema-REWA—Rema-REWA Set '49 Show Dates, Debate Profit Problems—p. 1, Nov. 1.

ASRE—Reports on Annual Meeting In Washington—p. 1, Dec. 13; p. 15, 21, Dec. 20.

ACRMA—Ice Cream Cabinet Manufacturers Form Product Section—p. 1, Dec. 20.

NARC—Reports on annual convention in Chicago—p. 1, Nov. 29; p. 14, 15, 16, 26, 27, Dec. 6; p. 10, 11, 12, 18, 19, 22, 24-30, Dec. 13; p. 2, Dec. 20.

NARC—Contractors Air Viewpoints on Warranties; Drafting of Model Form Committee's Goal—p. 14, Sept. 13.

NARC—NARC Adopts 12-Point Code of Ethics as a General Guide for Members—p. 13, Sept. 20.

NCRSA—NCRSA Membership Scope Widened—p. 1, Oct. 18.

NCRSA—Hill Presents NCRSA with 10-Point Program for Building Sales Potentials of Commercial Refrigerator Distributors—p. 7, Oct. 25.

NARDA—See 'Pooling' as Answer to High Installing Costs—p. 1, June 7.

NARDA (NERA)—NERA Sets '48 Policy, Asks Manufacturers' Aid In Stamping Out Co-ops and 'Backdoor' Selling—p. 6, Feb. 2.

NARDA—NERA Trade-In Guide Put In Hands of Dealers—p. 13, March 22.

NARDA—Recruiting Plan for Salesmen Gets Trial In Midwest Cities—p. 7, March 29.

NARDA—Trade-In Conference Asks Producers' Aid In Reconditioning and Market Techniques—p. 1, May 17.

NEWA—Reports on Buffalo convention—p. 1, 12, 17, May 17.

NFFLA—Reports on Chicago convention—p. 1, Nov. 1; p. 22, 23, 24, Nov. 8; p. 6, 24, 25, 26, Nov. 15.

RSES—Reports on Cleveland convention—p. 1, Feb. 2; p. 15, Feb. 9; p. 28, Feb. 16; p. 18, Feb. 23.

RSES—Schuld Outlines RSES Safety Program—p. 31, Oct. 25.

## COMMERCIAL REFRIGERATION

Refrigerated Bone Banks New Help to Surgeons In Orthopedic Cases—p. 7, April 5.

Shift In Dairy Plant Refrigeration Needs Brings Demand for New Kind of Equipment—p. 33, Jan. 26.

Ex-Factory Superintendent Finds It Easy To Sell Custom Built Refrigeration—p. 8, Oct. 18.

New Market Opens In Cooling Use by Nurserymen—p. 12, Jan. 26.

Columbus Pre-Packaging Experiment Reveals Less Waste, Increased Shelf Life, and Pay Loads—p. 42, Jan. 26.

Kroger 'Pilot Store' Provides Trial for New Method of Merchandising Perishables—p. 13, Jan. 12.

New Hotel (Terrace Plaza) Has 45 Refrigerated Spaces for Food, Beverages—p. 17, Aug. 23.

100 Hp. of Refrigeration at College Will Preserve Enough Food to Feed 8,000 Persons—p. 12, Sept. 27.

Loading Temperatures Key to Best of Truck Refrigeration, Carriers Told—p. 24, July 12.

Master Chart Locates Compressors, Motors, Valves for Quick Servicing of Large System—p. 14, July 12.

Self-Service Meats Create No Shangri-La, Cooke Cautions Supermarket Operators—p. 14, June 7.

Proper Temperatures, Air Conditioning Are Essential for Self-Service Meats—p. 18, June 14.

University Installs Big Refrigeration Plant as It Centralizes Food Handling for 10,000—p. 17, May 3.

World's Largest Warehouse, Scheduled for Completion In Dallas This Fall, Will Use 1,000 Tons of Refrigeration—p. 66, Jan. 26.

Survey Reveals Meter Plan of Payments Grows In Commercial Refrigeration Sales—p. 12, Aug. 16.

F. E. Ince Says Cooling Towers, Evaporative Condensers Reduce Water Waste 95%—p. 12, Oct. 18.

Simplicity, Reliability, More Heat Transfer Cited In Favor of 'Freon' Liquid Injectors—p. 25, Oct. 18.

Atmospheric Conditions, Not Poor Product, Are Basic Causes of Many Bad Insulation Jobs—p. 11, Oct. 18.

'Don't Blame the Valve' Without Checking Other Possible Trouble Spots—p. 31, July 5.

'Business Is Wonderful' for Commercial Dealer Who Devises Top-Notch Promotion—p. 14, March 29.

Henderson, Hildreth Outline Future Prospects for Industry—p. 20-21, Nov. 1.

Belshaw Tells ASRE Only Cracked, Snow Ice Keeps Fresh Foods Fresh Satisfactorily—p. 11, Nov. 8.

Inventory Appreciation Is Hidden Factor In Problem of Rising Costs, Shrinking Profits for Wholesaler—p. 12, Nov. 8.

Wholesaler's Idea of Display May Result In 'Gadgets' But They Also Mean Sales—p. 12, Nov. 15.

Commercial Dealership Needs 'Substantiability,' Organized Staff, Reliable Service Dept.—p. 17, Nov. 15.

Wholesaler Uses 2 Rooms, Semi-Self-Serve Plan to Get Maximum Benefit from Display—p. 20, Nov. 22.

Local Chain In Kansas City Experiments with New Ideas In Handling Pre-Packaged Meats—p. 10, April 19.

Personal Counter Service Found Preferable to Self-Serve by Baltimore Parts Wholesaler—p. 14, Nov. 29.

Guarantees on Commercial Equipment (NARC forum)—p. 14-16, Dec. 6.

Survey of Independent Retail Meat Dealers Indicates that over 60% Own Commercial Equipment 8 Years Old—p. 21, Dec. 6.

Ideas for Sales of Air Conditioning, Commercial Equipment (NARC forum)—p. 10-12, Dec. 13.

### STATISTICS

Sales & Users of Commercial Units, Conditioning Shown In Detroit Data—p. 28, Jan. 26.

Air Conditioning & Commercial Refrigeration Shipments:
Third Quarter—1947—p. 52-54, Jan. 26.
Fourth Quarter—1947—p. 22-23, April 12.
First Quarter—1948—p. 22-23, July 19.

## EXPOSITIONS

All-Industry Refrigeration & Air Conditioning Exposition—p. 1, 10, 22, Jan. 26; p. 1, 2, 10, 16, 17, 19, 20, 22, 23, 24, 26, 29, 30, 31, 33, 35, Feb. 9.

Dairy Industries Exposition—p. 1, 6-8, Nov. 8.

Chicago Home Furnishings Markets—p. 1, Jan. 12; p. 18, Jan. 19; p. 1, July 12.

International Heating & Ventilating Exposition—p. 1, Feb. 9; p. 1, Feb. 16; p. 17, 20, 21, 24, 26, Feb. 23.

International Store Modernization Show—p. 22-23, Aug. 9; p. 14-15, Aug. 16.

National Frozen Food Industry Exposition—p. 1, March 22; p. 1, 10, March 29; p. 14-15, April 5.

Rema-RSES Refrigeration & Air Conditioning Exposits & Conferences—
At San Francisco—p. 1, 4, 25, May 10; p. 22-23, May 17.
At Boston—p. 1, Oct. 18; p. 10, 11, 22, 23, Oct. 25.
At Chicago—p. 1, Nov. 29; p. 32-34, 36, Dec. 6.

## FEDERAL AGENCIES

FHA—FHA Outlines Standards for Using Aluminum Vent Pipes In Plumbing—p. 22, Aug. 23.

FRB—Rules and Interpretations on Regulation W—p. 10-11, Aug. 30 (text); p. 1, Aug. 23; p. 1, Sept. 6; p. 1, Sept. 27; p. 9, Oct. 18; p. 1, Nov. 1; p. 1, Nov. 8; p. 1, Dec. 20.

FTC—Presto To Comply with FTC Ban on 'Exclusive' Dealing—p. 1, Nov. 8.

Internal Revenue Dept.—Excise Tax Dropped on Store Coolers—p. 1, May 3.

NLRB—Taft-Hartley Act Is Applied to Retailer—p. 1, Sept. 27.

Public Health Service—Poor Refrigeration Big Cause of Food Poisoning—p. 1, Sept. 20.

NLRB—Contractor-Union Collusion Charged In 'Test Cases' Involving Right to Work—p. 1, Nov. 22.

## FROZEN FOODS, FREEZERS

Tests at Penn State Show That Properly-Wrapped Meat Is More Tender, Less Rancid at Lower Temperatures—p. 8, Jan. 19.

Quick Freezing of Poultry by Thousands Requires Wide Variety of Cooling Equipment—p. 50, Jan. 26.

Frozen Turkey, Sliced Into Steaks, Yields More Meat, Year-Round Item—p. 12, Feb. 9.

Would Home Delivery Service Break Open the Log Jam on Frozen Food Sales—p. 28, Feb. 9.

Quick Freezing with Cold Air—p. 18, April 19; p. 32, April 26.

Home Freezer Specifications—April 26.

Seafood Processors Show Largest Increase Among Packers of Frozen Foods—p. 17, April 26.

Educate Retailers In Proper Handling of Frozen Foods Are Advised—p. 26, April 26.

Freezer Burn on Poultry—p. 40, April 26.

Check All Angles Before Buying Freezer, Author Advises Farmers—p. 10, May 31.

Belle Lawson Builds a Business by Providing Dealers with Frozen Dinners for

Good Low-Temperature Display Fixtures Are Still Bottleneck In Frozen Food Distribution—p. 16, Nov. 22.

Changing Temperatures Below 0° F. Show Little Effect on Properly-Wrapped Frozen Foods—p. 15, Dec. 20.
Freezer Demonstrations—p. 8, Aug. 9.

'Look' Magazine Tells How Home Freezer Saves $1,356 a Year, Many Hours of Work—p. 8, Aug. 16.

Pure Ascorbic Acid Improves Storage of Some Frozen Foods—p. 16, Aug. 30.

Northwest Dealers Ask More Education to Up Freezer Sales—p. 33, Sept. 6.

Heavy, Pliable Type Rates High on Locker Paper Wrapping Tests—p. 16, Sept. 27.

Estimated Savings of $592 In 10 Years Convinces Family Freezer Is a Good Buy—p. 13, Oct. 4.

Putting Home Freezer Story Across to Farmer Calls for Down-to-Earth Arguments on How Appliance Will Aid Him—p. 24, Oct. 18.

NARDA (NERA) Provides Answers to 10 Questions Prospects Ask About Home Freezers—p. 24, Oct. 25.

Home Freezer Market Not Even Scratched But Huge Educational Program Needed—Smith—p. 27, Oct. 25.

### STATISTICS

Home Freezer 1947 Sales Hit 500,000 Mark—p. 1, Feb. 16.

## HOUSEHOLD APPLIANCES

Demand for Combined Refrigerator-Freezer Exceeds Conventional Model, Survey Shows—p. 6, Jan. 5.

Appliance's Use In Household as Well as Current Rating Are Among Factors Determining Proper Selection of Electric Cords—p. 26, Jan. 26.

Simply-Worded Appliance Warranty Wins Customer Confidence for Eastern Dealer—p. 2, May 17.

Weak Capitalization, Over-Franchising Signal Danger to Dealer In Today's Normal Market—p. 10, July 26.

Engineers Debate on 'High Humidity' In Household Models—p. 1, June 14.

What Are the Factors In the Selection of an Insulation?—p. 28, June 28.

See 'Squeeze' for Dealers Handling Trade-In Boxes—p. 1, Aug. 16.

'Portable' Boxes Are Little; So Is Production—p. 1, Oct. 25.

Customers Want More Normal Temperature Storage, Frozen Food Space In Refrigerators—p. 24, Oct. 25.

Range Wiring Handling Simplified In Detroit—p. 1, March 8.

Economically Stable, Dollar-Rich Farmers Can Provide Industry $5 Billion Appliance Market—p. 6, May 24.

Chicago's Electric Center Is Reconditioning & Clearing House for Refrigerator Trade-Ins—p. 10, March 1.

Animals 'Parked' at Curb To Herald Revival of Retailer's Livestock-for-Appliances Promotion—p. 11, July 5.

'Give Us Realistic Appraisal of Market,' Inland Empire Dealers Ask Distributors—p. 11, July 5.

Unrealized 'Dream' of Average Ex-GI Leaves Door Open for Wide-Awake Home Appliance Dealer, Detroit Poll Indicates—p. 5, Sept. 13.

Dealer's Trailer Contacts Neighborhood Prospects Who Can't Be Lured Into Store—p. 15, Oct. 18.

Committee Issues Rules To Regulate Credit Ads—p. 1, Oct. 4.

Personal Credit of Retailers Ranks High, Survey Finds—p. 5, Nov. 15.

Appliance Code Is Altered by Bureau at Knoxville—p. 2, Feb. 16.

Better Business Bureau Sets Up Standards To Regulate Appliance Ads In Cincinnati—p. 5, Nov. 22.

What Does Manufacturer Watch for When He Selects His Dealers?—p. 12, Jan. 12.

'We'll Stay Out of Range Selling—If,' Says Detroit Edison—p. 1, March 22.

Distributor's Video Show Trains Dealers, Sells Public with Demonstrations, Human Interest—p. 15, Nov. 29.

Dealer's Holiday 'Economy Sales' Dispose of Trade-In Refrigerators at a Profit—p. 25, Dec. 6.

### STATISTICS

Cumulative Record of World Sales of Electric Refrigerators with Exports, Retirements, and Market Saturation—p. 1, Feb. 23.

Household Unit Sales In 1947 Hit 3,420,000—p. 1, Feb. 23.

*(Concluded on next page)*


EYE CATCHER

Outstanding in the display case field, the SHERER Model 500 offers food merchants—

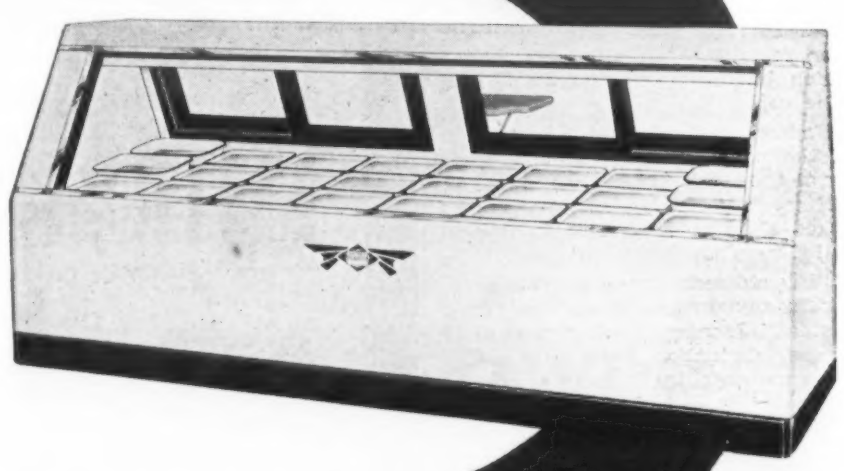
WORKABILITY—easy to work out of

VISIBILITY—customer sees all the display

CAPACITY—3 platters deep on one shelf

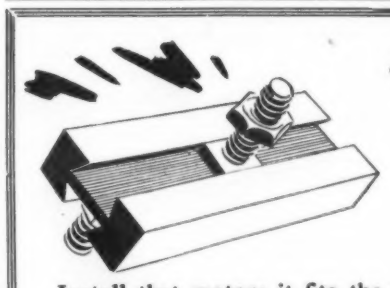
BEAUTY—gracefully rounded contours

It has everything expected in a good meat case.



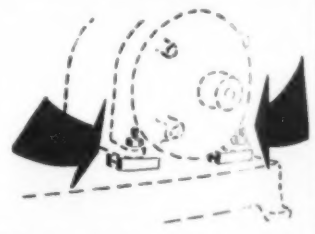
SHERER REFRIGERATED MERCHANDISERS

SHERER-GILLETT CO., MARSHALL, MICHIGAN



Sold by Leading Jobbers from Coast to Coast!

The Motor Base Adapter Plate



Install that motor; it fits the base—any base. No drilling or filing. No holes out of line. No rotor shaft too long or too short. Carry motors and adapters in every service car.

Inquiries from JOBBERS invited

MOTOR ADAPTER CORPORATION

4730 JOY ROAD DETROIT 4, MICHIGAN TYLER 6-1224

# Guide to 1948 News Stories--

*(Concluded from preceding page)*

1947 Figures Reflect Washer Sales Spurt—p. 1, Feb. 23.
NARDA (NERA) Study Estimates Half of Unit Volume Moved by 6% of Nation's Dealers—p. 6, March 8.
Sales-by-States by Dealers for NEMA Firms for 1947—p. 4, March 22.
Most Dealers Handle More Than One Line of Ranges, IEEDA Survey Indicates—p. 2, Oct. 4.

## LEGAL NEWS

Strong Arguments Are Advanced for Exempting Refrigeration Contractor from Wages & Hours Law—p. 14, March 22.
NEWA Hears How Taft-Hartley Act Can Smooth Labor Problem for Distributors—p. 17, May 17.
Federal Official States Conditions Under Which Installing Trades May Be Covered or Exempted from Wage-Hour Law—p. 20, May 31.
Water Conservation In Air Conditioning Systems Is Law In Rochester (N. Y.)—p. 1, June 7.
New York Fair Trade Price Suits:
Court Restrains Dealers Against Price Cutting—p. 1, June 7.
N. Y. Dealer Faces New Fair Trade Price Suit—p. 1, Oct. 4.
Dealer Refuses Injunction In Fair Trade Price Case—p. 32, Oct. 18.
Commission Salesmen Still Excluded from Social Security—p. 1, June 21.
How the Taft-Hartley Act Applies to the Industry, Particularly Contractor Firms—p. 26, June 21.
Service Firms' Suit Says RCA Service Contract Is Anti-Trust Violation—p. 2, Aug. 30.
D. C. Suburbs Are Restricting Use of Cooling Water—p. 1, Oct. 4.
How Industry Groups Cooperate to Prepare Revisions to Refrigeration B9 Safety Code—p. 14, Oct. 18.
'Free' Means No Other Purchase Needed, Dealers Told by Minnesota Officials—p. 2, Oct. 25.
B9 Safety Code Will Be Adopted by Building Group—p. 4, Oct. 25.
U. S. Appeals Court Upholds Validity of Recold Water Defrost Coil Patent—p. 12, July 26.
Detroit Groups Get Preview of Revised B9 Safety Code—p. 1, Nov. 15.
58% of Wholesalers In 3 States Found Violating Wage & Hour Law—p. 11, Nov. 22.

## LICENSING

Licensing by Law of Contractors Is Blasted by ACRMA—p. 1, June 28.
NARC Hears Arguments For & Against Refrigeration Contractor Licensing—p. 24-30, Dec. 13.
Contractors Reply to ACRMA Blast Against Licensing—p. 1, July 12.
Provisions In Some New Codes Alarm Many In Industry—p. 1, Jan. 26.
New Refrigeration Code of Los Angeles Differs In Some Respects from Standard—p. 70, Jan. 26.
Stiff Exam Set for Contractors by California Law—p. 1, May 10.
California Contractors To Be Given Special Exams on Air Conditioning—p. 13, May 31.
Reciprocal City Licensing Aim of New Code (Detroit)—p. 1, Aug. 30; p. 1, 19, Sept. 6.

## LOCKER PLANTS

Partners Study Layouts, Equipment, and Rates of 35 Locker Plants, Then Build Their Own—p. 20, March 15.
Locker Contractors Told To Aim for 'Backroom' Plants—p. 1, March 29.
Cost of Setting Up 500-Locker Plant Would Reach $14,450, FFLI Estimates—p. 5, April 5.
Proper Equipment, Layout, and Operating Methods for a Successful Locker Plant Business Outlined—p. 5, June 7.
Old Building Remodeled to Provide Up-to-Date Locker Plant—p. 19, June 28.
Storage, Freezing Temperature Too High In Many Plants, Iowa Survey Indicates—p. 13, Aug. 2.
Missouri Leads In Number of New Locker Plants as National Total Reaches 10,617—p. 2, Oct. 11.
41% of Locker Plants Now Merchandise Home Freezers—p. 19, Oct. 25.
Huge Locker Market Is Untouched But Must Be Sold, Convention Told—p. 22, Nov. 8.
Faulty Packaging, Poor Processing Called Chief Reasons Why Women Give Up Lockers—p. 24, Nov. 15.
Locker Operator Tells How He Became Largest Home Freezer Dealer In Arizona—p. 6, Nov. 15.

## SERVICING

Production Line Dock Speeds Loading of Trucks with Parts for Refrigeration Service Calls—p. 27, Jan. 26.
Serviceman, User Both Get Blame for Poor Care of Units—p. 9, Feb. 16.
Good Leak Detection Saves Serviceman Money, Trouble, Clark Says In Review of Evacuation, Pressure Methods—p. 11, March 8, see also p. 31, March 29.
Service Problems Not Overly Complicated on Multiple Stage Low-Temperature Jobs—p. 26, March 15.
Proper Application of a Dryer Is In a Cold Location, Service Engineers Told—p. 20, April 19.
Toronto Quiz Session Highlights Practical Service Problems—p. 28, April 19.
Reed Gives Maintenance, Replacement Principles for Compressor Shaft Seals—p. 25, June 28.
Drier Placed Beyond Heat Exchanger Cuts Moisture Problems—p. 9, Oct. 25.
Using Proper Valve for Each Application of Evaporator Solves Many Service Problems—p. 57, Jan. 26.
Why, How, Where of Applying Driers on Refrigeration Systems Outlined to Eastern Servicemen by Dr. Walker—p. 14, Nov. 15.
All-Year Service Agreement Helps Contractor Keep In Touch with Air Conditioning Users—p. 8, Nov. 29.
How Refrigeration Service, Parts Can Best Be Merchandised (NARC forum)—p. 26-27, Dec. 6.
Control of Labor Costs, Inventory Are Key to Profitable Service Business (NARC forum)—p. 18-19, Dec. 13.
Maintenance of Fans In Air Conditioning Includes Frequent Inspection and Cleaning—p. 21, Dec. 13.
RSES Cleveland Convention 'Information Please'—p. 28, Feb. 16.
Safety Rules for Serviceman's File—p. 19, March 8.
Care In Determining Cost Spells Difference Between Profit and Loss In Service Work—p. 24, March 22.

**For those desiring to purchase back copies, the NEWS has a limited supply of the following issues on hand: Jan. 5, 12, 19; Feb. 23; March 1, 8, 15, 22, 29; April 5, 12, 19; May 3, 31; June 14; July 5, 12, 19, 26; Aug. 2, 9, 16, 30; Sept. 6, 20; Oct. 4, 18, 25; Nov. 1, 22, 29; Dec. 6, 13, 20.**

N. Y. Guild Survey Shows Average Price Charged for Service Work In N. Y. Area—p. 24, May 3.
Chilled Water Bath In Refrigerant Stand Solves Problem of Charging In Hot Weather—p. 28, May 3.
Replacement of Complete Sub-Assemblies Called Likely Hermetic Repair Trend—p. 22, May 17.
Job Outlook Is Best In Handling Larger Systems—p. 1, June 21.
Receiver-Transmitter Installed In Car Tested by Contractor as Time Saver—p. 21, July 19.
How to Service Room Air Conditioners:
Start with Electrical System First—p. 24, Aug. 23.
Checking and Repairing Refrigeration System—p. 18, Aug. 30; p. 30, Sept. 6; p. 24, Sept. 13; p. 22, Sept. 20.
Checking and Servicing Air Handling System—p. 24, Sept. 27; p. 26, Oct. 4.
Numerous Check Points Suggested by Mfr.—p. 26, Oct. 25.
Trouble Analysis Chart Indicates Remedies—p. 24, Nov. 1.
Checking of Electrical Circuits Outlined—p. 16, Nov. 8; p. 28, Nov. 15.
Refrigeration Problems and Their Solution—By P. B. Reed:
The Oil Cycle, Part XII—p. 22, Jan. 5.
Copper Plating—p. 26, Jan. 12; p. 17, Jan. 19.
Oil Slugging—p. 74, Jan. 26.
Cleaning Parts Before Repairing—p. 27, Feb. 16; p. 22, Feb. 23; p. 20, March 1; p. 26, March 8; p. 24, March 15; p. 26, March 22.
Refrigerant Cylinders—p. 26, March 29; p. 26, April 5; p. 24, April 12; p. 24, April 19; p. 24, May 17.
Refrigerant Tables—p. 24, May 24; p. 24, May 31; p. 30, June 7; p. 28, June 14; p. 28, June 21; p. 28, June 28; p. 24, July 5; p. 26, July 12; p. 24, July 19.
Mystery of the Hidden Moisture—p. 24, July 26; p. 21, Aug. 2; p. 18, Aug. 9.
Comparative Costs of Home Heating Fuels—p. 31, Aug. 16; p. 23, Aug. 23.
Factors In Evaporative Cooler Operation—p. 27, Sept. 20; p. 19, Sept. 27.
Absorption Type Refrigeration—p. 37, Oct. 4; p. 27, Oct. 11; p. 31, Oct. 18; p. 31, Oct. 25; p. 23, Nov. 1; p. 27, Nov. 8; p. 31, Nov. 15; p. 27, Nov. 22; p. 35, Dec. 6.
Lost Time and Short Cuts—p. 27, Dec. 20.

## MISCELLANEOUS TEXTS

Text Shows Requirements of Detroit's New Ordinance for Plant Operating Engineers—p. 20, Sept. 13.
By Carefully Watching His Expense Rations, Wholesaler Attains Good Capital Structure—p. 6, Feb. 23.
Contractors, Wholesalers Tell Each Other Where They Stand—p. 14, Feb. 16.
Fundamentals of Controlling Refrigerant To Obtain Temperature Outlined for RSES—p. 28, April 12.
Engineering Approach to the Use of Fans—p. 27, June 7.
Factors In Design and Maintenance of Evaporative Condensers Outlined—p. 22, Aug. 2.

## WORLD TRADE NEWS

Latin American Export Picture (continued):
Report on Puerto-Rico and Dominican Republic (By Harry D. Friedman)—p. 27, Jan. 5.
Report on Argentina (By Harry D. Friedman)—p. 63, Jan. 26.
Report on Brazil (By Harry D. Friedman)—p. 27, March 22.
New India Cold Storage Plants To Cut Down Big Food Spoilage Losses—p. 27, Oct. 4.
How Industry Can Get Foreign-Aid Business—p. 24, Oct. 11.
Cuba, Venezuela, Colombia Classified as Promising Latin American Markets—p. 25, July 12.
Chilean Firm In Production on Domestic Refrigerators—p. 28, Aug. 25.
U. S. Can Stop Soviet by Balancing Trade—Haddon—p. 24, June 7.
Air Conditioning, Commercial Exports Hit $32.6 Million In First 7 Months of 1947—p. 62, Jan. 26.
Analysis of South American Markets by Eugene Hesz:
Industry's Goods Needed by Young Nations Working to Develop Selves—p. 29, Aug. 9.
Mexico, Venezuela, Cuba Join 'Big Three' as Leading Latin American Markets—p. 32, Aug. 23.
Latin American Demand for Refrigerators Compared with Imports In Pre-War Period—p. 32, Sept. 6.
Big Latin American Cities, Out of Extreme Climates, To Offer Ever-Growing Markets—p. 26, Sept. 13.
Rising Petroleum Production In Venezuela Should Keep Economic Picture Bright—p. 28, Sept. 20.
Refrigerator Demand In Venezuela Set at 7,500 Domestic, Commercial Units a Year—p. 27, Sept. 27.
Increased Use of Refrigeration Abroad Could Cut Volume, Cost of Food Imports—p. 34, Oct. 4.
Indian Lists Factors Involved In Question: Will India Be British or American Market—p. 24, Oct. 11.
With a 'Very Favorable' Balance of Trade, Cuba Offers Growing Market for U. S. Goods—p. 18, Oct. 18.
Market In Cuba for Products of Industry 'Not Very Large But Sound and Promising'—p. 28, Oct. 25.
Industrial Products Can Foster Goodwill Between U. S. & Mexico, Brazil—p. 20, Nov. 8.
Analyst Opens Series on Possibilities for Industry To Increase Its Exports to Brazil—p. 27, Nov. 15.
Dollar Problem Bars Filling Strong Demand for U. S. Appliances In Southeastern Brazil—p. 20, Dec. 13.
Brazilian Refrigerator Enterprise Indicates U. S. Producer Must Watch Export Market—p. 20, Dec. 20.

## HIRING, TRAINING, COMPENSATING SALESMEN

With Salary Plan Store Puts Salesmen Outside, Gives Them Training, Controls Their Activities—p. 5, Feb. 2.
Sales Merit System Periodically Adjusts Salesman's Pay on Basis of Performance—p. 10, May 17.
Toledo Dealers Back Cooperative Drive for Recruiting New Appliance Salesmen—p. 6, June 14.
Thorough Training In Fundamentals Equips Salesman To Sell Customer with Confidence—p. 9, June 14.
Mechanical Brain Shows Commercial Salesman Credit He Gets on Each Sale—p. 19, July 12.
Here's the Way an Expert Would Hire, Train His Specialty Salesmen to Sell—p. 2, Dec. 20.

# National Group Outlines 7-Point Program To Improve Lot of Wholesale Salesmen

NEW YORK CITY—Although "potentially the most powerful professional group in America," wholesale salesmen suffer a greater share of inequalities than any other group of professional workers, Louis A. Capaldo, president of the National Council of Salesmen's Organizations, asserted last week in his report to the council's annual meeting at its headquarters here.

Capaldo, who represents the New York-Penn-Ohio Travelers Association, was re-elected for his second term as council president following submission of his report, which reviewed the council's accomplishments during the past year and outlined a program for 1949.

The council's seven-point program of protections and benefits for salesmen which will be sought during 1949, as a result of action taken at the meeting, include:

1—Passage of a special amendment to the Federal Security Act to specifically provide coverage for salesmen, many classes of whom are now without the protection of social security insurance, unemployment compensation, and old age benefits.

2—Amendment of the laws governing state and federal courts to provide for inclusion of the cost of legal fees in judgments awarded salesmen who are forced to sue for recovery of earned commissions.

3—Establishment of a permanent Salesmen's Legal Advisory Bureau with branches throughout the country especially equipped to inform them of their rights and advise them according to their best interests.

4—Liberalization of income tax regulations to increase allowable deductions from salesmen's tax returns, on the grounds that they are indirectly the victims of a system of double taxation.

5—Obtaining special considerations for salesmen where local traffic problems and parking restrictions inflict hardships on men whose automobiles are a vital means of earning their livelihood.

6—Establishment of a salesmen's national arbitration panel similar to those in other professional groups to provide the medium of arbitration to settle employer-salesmen disputes.

7—Obtaining acceptance of the principle of severance pay and protection of commissions for salesmen upon separation from employment.


Acme

**FREON OIL SEPARATORS**

Double filter for double efficiency. Maximum separation of oil from refrigerant vapor. Six models meet all requirements for installations from ¼ HP up to 10 HP. All installations can be serviced at moderate cost. Underwriters laboratories approval seal on each model.

ACME PRODUCTS

**ACME INDUSTRIES, INC.**
Jackson, Michigan
*Representatives in all principal cities*

BOOKS...
*You Will Enjoy Reading*

NO OTHER STAR

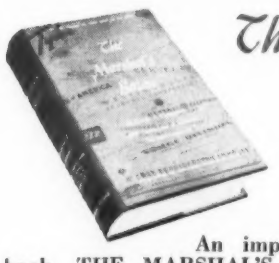
*By Jane Williams*

"Not since Rhett Butler has the hero of a novel been so fascinating a scoundrel as is Kirby Storm. . . . Few women live as vividly and movingly in the reader's minds and hearts as Lib-Lee Morral." Here is a grand novel of mid-America; a vivid, moving story set against the background of the first three decades of the century. NO OTHER STAR offers a truly memorable reading experience with an unusual and dramatic climax so powerful that it will not soon be forgotten. **$3.00**

THE MYSTERIES OF BLAIR HOUSE

*by Roy Eastman*

For the died-in-the-clue mystery fan at last comes a spine-tingling thrill with the first really new plot twist in years. Done in a style and tradition reminiscent of that master chiller, A. Conan Doyle, THE MYSTERIES OF BLAIR HOUSE so impressed its publishers that costs were ignored in producing this memorable first edition. In two colors, beautifully bound, and with "mood illustrations" by William A. Bostick, this is an ideal gift and a prideworthy library addition. **$2.75**



*The Marshal's Baton*

*by George F. Taubeneck*

An important and significant book, THE MARSHAL'S BATON is the "advanced course" in salesmanship, written by the author of the deservedly popular ONE FOOT IN THE DOOR. Here, for the first time, is the distilled knowledge and experience of the country's most brilliant sales executives who saw the need of codifying their sales wisdom for the benefit of younger men. It is a brilliant new source of power, and a unique and highly useful contribution to the science of creative sales management. **$5.00**

ORDER TODAY Use this Coupon

ORDER BLANK

Please Send Me The Following:

..... Copies of *"No Other Star"*

..... Copies of *"The Mysteries of Blair House"*

..... Copies of *"The Marshal's Baton."*

☐ Check Enclosed ☐ Bill Me

Name .....

Address .....

City..... Zone..... State.....

CONJURE HOUSE
BOOK DIV. OF BUSINESS NEWS PUB. CO.
450 WEST FORT ST., DETROIT 26, MICH.

EASIER THAN LIGHTING A MATCH

*You save time . . . avoid confusion and get speedy delivery when you order from the RSI Catalog. No need to write lengthy descriptions . . . just jot down the special RSI catalog number and your order is finished.*

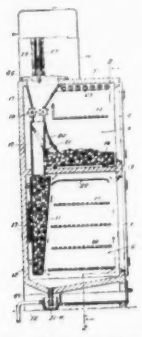
*Send us an order today. Use your letterhead, please*

**REFRIGERATION SERVICE, INC.**
West Coast Wholesaler since 1928
3109 Beverly Blvd., Los Angeles 4, EX. 3111

# PATENTS

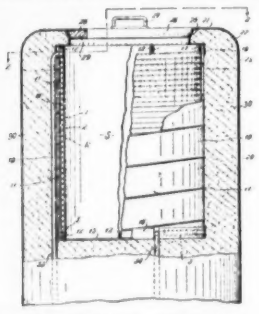
## Week of September 14 (Continued)

**2,449,132. REFRIGERATOR FOR MAKING AND USING CRUSHED ICE. Louis V. Lucia, West Hartford, Conn. Application Sept. 22, 1944, Serial No. 555,275. 5 Claims. (Cl. 62—2.)**



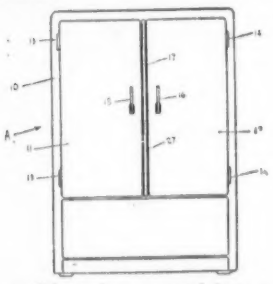
1. In a refrigerating system, the combination of a cabinet having a storage compartment and a cooling compartment therein, an electrically operated machine for producing ice positioned above said cabinet and adapted to deliver pieces of ice through an opening in the top of said cabinet, a chute extending downwardly within said cabinet, means in said storage compartment for receiving ice from said chute, and means in said chute responsive to the quantity of ice in said compartments for deflecting the ice from said chute.

**2,449,343. REFRIGERATION APPARATUS. Viggo V. Torbensen, Cleveland, Ohio, assignor to Gertrude S. Torbensen, Cleveland, Ohio. Application Feb. 12, 1945, Serial No. 577,545. 7 Claims. (Cl. 62—99.)**



1. In refrigeration apparatus, an evaporator including a wall made of efficient heat conducting material and arranged with one of its sides exposed to the refrigerating space of the apparatus, a device disposed in relation to the opposite side of said wall as to enclose therewith a refrigerant passage, said device comprising adjacent trough-like parts each of which has one of its edges contacting said wall and its opposite edge engaging the longitudinal medial portion of the adjacent part, a reinforcing member closely embracing said device in firm contact with the side thereof remote from said wall, and means providing a refrigerant circuit including said passage.

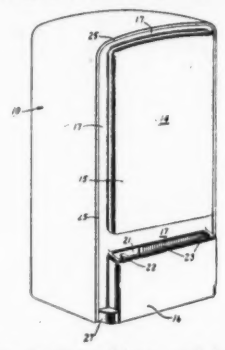
**2,449,384. REFRIGERATOR MULLION CONSTRUCTION FOR PREVENTING CONDENSATION. Willis E. Hursey, Oak Park, and Gilbert Strunk, Glen Ellyn, Ill., assignors to Seeger-Sunbeam Corp., (Now Seeger Refrigerator Co.) St. Paul Minn., a corporation of Minnesota. Application Jan. 9, 1946, Serial No. 639,945. 8 Claims. (Cl. 62—89.)**



1. A refrigerator comprising a cabinet body having a pair of door openings in one side thereof, a mullion in said body between said openings, a door in each of said openings, said doors being hinged to sides of said door openings opposite said mullion, marginal portions on said doors overlying portions of said cabinet side and mullion in closed positions of the doors, and a projecting member on said mullion projecting outwardly beyond said one cabinet side between said marginal portions of said doors.

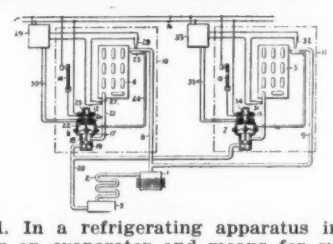
**2,449,415. REFRIGERATOR CABINET CONSTRUCTION. Theodore W. Rundell, Abington, Pa., assignor to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Feb. 6, 1948,, Serial No. 6,760. 7 Claims. (Cl. 62—116.)**

1. In a refrigerator, a cabinet having a plurality of compartments therein, one of said compartments being adapted to house a condensing unit, and a panel structure associated with a side of said cabinet, said panel structure including a sheet having a recessed portion extending



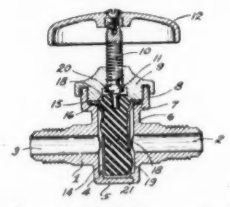
outwardly of the cabinet and having marginal portions secured to adjacent portions of said cabinet and said recessed portion being so positioned as to comprise wall structure for the said one compartment and being apertured in an upper region thereof, whereby said recessed portion comprises a flue adapted to promote flow of cooling air in heat exchange relation with a condensing unit disposed within said one compartment.

**2,449,437. SUPERHEAT CONTROL FOR REFRIGERATING APPARATUS. Clark E. Winchester, Roanoke, Ind., and Harold F. Lathrop, Philadelphia, Pa., assignors to General Electric Co., a corporation of New York. Application May 27, 1947, Serial No. 750,712. 6 Claims. (Cl. 62—8.)**



1. In a refrigerating apparatus including an evaporator and means for supplying liquid refrigerant thereto and for withdrawing vaporized refrigerant therefrom, a thermostatic expansion valve including actuating means dependent upon the superheat of the vaporized refrigerant for controlling the admission of liquid refrigerant to said evaporator, means responsive to the temperatures at the inlet and outlet of said evaporator for producing an electric voltage proportional to the difference between the inlet and outlet temperatures, and means dependent upon said voltage for applying a boosting force to said actuating means.

**2,449,481. VALVE. George H. Hufferd, Shaker Heights, and George O. R. Lindgren, Willoughby, Ohio, assignors to the Weatherhead Co., Cleveland, Ohio, a corporation of Ohio. Application May 18, 1944, Serial No. 536,070. 10 Claims. (Cl. 251—114.)**



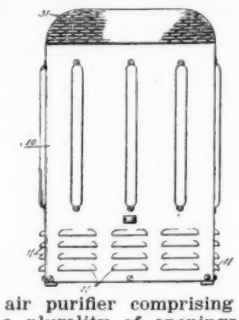
5. A valve comprising a body having walls defining a plug recess, said body being formed with inlet and outlet openings communicating with said recess, a plug disposed in said recess and spaced from the edges of said openings and from the wall of said recess between said openings so as to define a fluid passage through said recess, said plug including sheathing members aligned with said inlet and outlet openings and having edges spaced apart defining a space aligned with the wall of said recess between said inlet and outlet openings, deformable material filling said sheathing members and said space and means for exerting pressure on said deformable material to cause the same to be deformed through said space into sealing engagement with the wall of said recess between said inlet and outlet openings to prevent fluid flow through said recess between said openings.

### AVAILABLE FOR LICENSING OR SALE

Pat. 2,443,379. REFRIGERATING SYSTEM OF THE INERT GAS TYPE. Patented June 15, 1948. A refrigerating system having three continuous cycles involving the activity of ammonia, distilled water, and hydrogen gas. Heat is applied to the generator and expels ammonia vapor from the solution through the ammonia vapor chamber into the condenser, where the ammonia vapor is condensed to liquid. The liquid ammonia flows from the condenser to the evaporator and through a connection having two branches. One branch extends to an inert gas chamber, and the other to a water and ammonia solution tank. An inert gas return connection extends from the ammonia vapor chamber to the solution tank associated with a spiral absorber coil (one above and one below the solution tank) so that ammonia evaporates and diffuses into the hydrogen, producing a refrigerating effect in the refrigerator cabinet. (Owner) F. E. Dixon, 1819 W. 70th St., St. Los Angeles Calif. Group 35—84. Reg. No. 9,918.

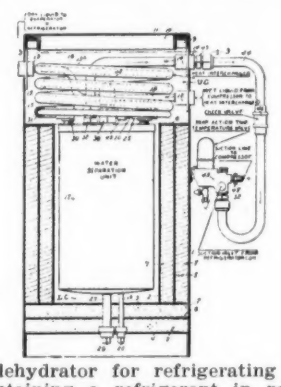
## Week of September 21

**2,449,681. AIR PURIFIER. Ray Wilson, Chicago, Ill., assignor to Richard R. Cook, Chicago, Ill. Application July 23, 1947, Serial No. 762,966. 2 Claims. (Cl. 21—74.)**



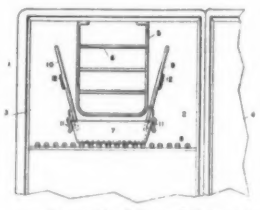
1. An air purifier comprising a closed cabinet, a plurality of openings adjacent the base of said cabinet adapted to permit the entry of air into said cabinet, a pair of ultraviolet lamps mounted within said cabinet above said openings, a plurality of flat metallic parallel plates mounted within said cabinet above said lamps and positioned transversely thereto, said plates electrically connected to said cabinet, a plurality of flat metallic parallel plates slidably and insulatedly mounted within said first plates, said second plates connected to an electrical source of supply adapted to maintain a high negative charge on said second plates with respect to said first plates, an electric fan mounted within said cabinet above said plates, said electric fan and said ultraviolet lamps connected to a suitable electrical source of supply, and a plurality of openings adjacent the top of said cabinet adapted to permit the exit of air from said cabinet, said electric fan adapted to draw air through said plurality of openings adjacent the base of said cabinet, into said cabinet past said ultraviolet lamps, through said parallel plates and out said plurality of openings adjacent the top of said cabinet for purification of said air.

**2,449,688. DEHYDRATOR FOR REFRIGERATING SYSTEMS. Clinton C. Brinkoeter, San Antonio, Tex., assignor to Ed Friedrich, Inc., San Antonio, Tex., a corporation of Texas. Application Nov. 27, 1944, Serial No. 565,396 8 Claims. (Cl. 62—115.)**



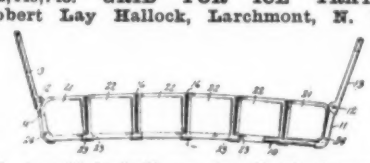
1. A dehydrator for refrigerating systems containing a refrigerant in refrigerating circuit, said dehydrator including: a casing; a water separation unit in said casing; a heat interchanger in said casing; operative connections between said heat interchanger and said water separation unit, by virtue of which the refrigerant to be dehydrated is first passed through one part of said heat interchanger, then through said water separation unit, and then through another part of said heat interchanger; and means whereby said heat interchanger may have its terminals operatively connected in the refrigerant circuit of the refrigerating system.

**2,449,709. REFRIGERATOR DEFROSTING DEFLECTOR. James V. Mesite, Baltimore, Md. Application Jan. 16, 1948, Serial No. 2,776. 5 Claims. (Cl. 62—1.)**



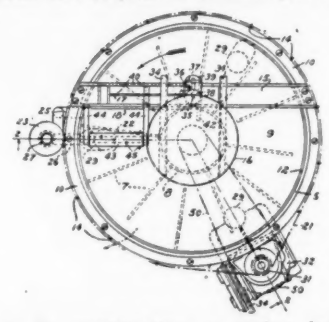
1. In a household refrigerator having a plurality of walls for enclosing a food storage space therein, an evaporator supported thereon from a top wall thereof; a shelf supported from the lateral walls thereof; a drip tray having a bottom and side walls supported on said shelf beneath the evaporator; a pair of shield elements one for each lateral surface of the evaporator, each comprising a substantially planar sheet having proximate the lower edge thereof and secured thereto a plurality of clip elements for attachment to the side walls of the drip tray, said clip elements having a base portion, an upstruck spacer portion, and a flange portion, whereby a channel is provided between the flange portion and the opposed portion of the shield surface for the reception of said walls of the drip tray.

**2,449,743. GRID FOR ICE TRAYS. Robert Lay Hallock, Larchmont, N. Y.**



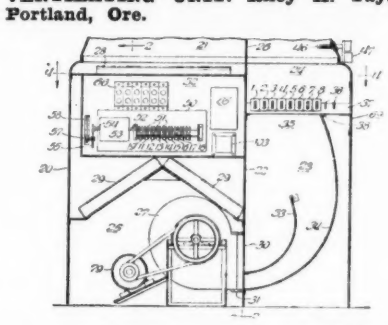
6. A grid including a longitudinal member adapted to be bowed, a lever handle pivotally associated with said member and adapted first for releasing the grid from a tray and then for bowing said member, said lever handle being movable through a given arc, and a part attached to and movable in correspondence with the lever handle having a first abutment engageable with a tray at a given point in the lever arc for release of the grid from the tray and a second abutment engageable with another part of the grid at a further given point in the arc of travel of the lever handle to cause the grid to be bowed.

**2,449,730. SLUSH ICE MAKING MACHINE. Willian H. Taylor, Waukesha County, Wis., assignor to the Vilter Mfg. Co., Milwaukee, Wis., a corporation of Wisconsin. Application Nov. 20, 1944, Serial No. 564,241. 17 Claims. (Cl. 62—109.)**



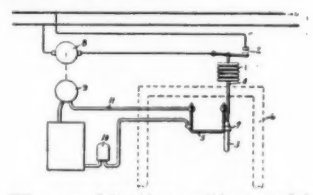
1. In combination, a casing having a flat annular freezer surface, means for constantly maintaining said surface at freezing temperature, means for constantly feeding liquid upon and throughout the area of said surface, and a constantly revolving scraper for planing the congealed liquid from the surface and for conveying the removed product toward the center of the annulus

**2,449,755. ELECTRIC HEATING AND VENTILATING UNIT. Riley H. Taylor, Portland, Ore.**



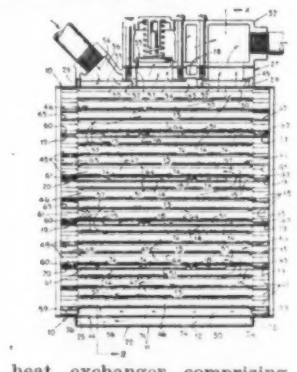
1. An electric furnace comprising a cabinet containing a plenum chamber and an air return chamber in side by side relation therewithin, a blower in said air return chamber for blowing air from said air return chamber through said plenum chamber, a bank of heating units disposed in closely spaced relation across the cross section of said plenum chamber, a single air outlet in said plenum chamber, a filter in said air return chamber, an air inlet for said return chamber having a single source of air supply, and a damper in said inlet to control rate of air flow produced by said blower.

**2,449,800. REFRIGERATION CONTROL APPARATUS. Edgar H. Ayers, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application Dec. 8, 1944, Serial No. 567,268. 3 Claims. (Cl. 62—4.)**



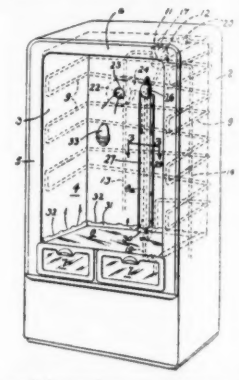
1. The combination with a refrigerator provided with a cooling compartment, an evaporator in said compartment and means including driving means for maintaining a predetermined low temperature in said evaporator, of temperature responsive means comprising a sealed container provided with a movable portion and elogated member, a gas in said container adapted to be gasified at the normal temperatures of the air in said cooling compartment between predetermined maximum and minimum values but condensed to a liquid at temperatures substantially as low as the temperature of said evaporator, control means for said driving means operated by said movable portion in response to changes in the pressure of said gas to start and stop said driving means, and means mounting said elogated member in an upright position in said cooling compartment with an upper portion of said elongated member of predetermined length in good thermal relation with said evaporator and a lower portion of said elongated member extending downward into said cooling compartment so that the wall of said upper portion is maintained by said evaporator at a low temperature at which said gas is condensed on said wall and runs down said wall to the lower portion of said tubular member where it is gasified by the higher temperature of the air in said cooling compartment thereby to provide a rapid transfer of heat from said air to said gas and control of said driving means in response to the temperature of said air.

**2,449,822. HEAT EXCHANGE APPARATUS. Lauritz Benedictus Schibbye, Essvik, Sweden, assignor to Svenska Cellulosa Aktiebolaget, Stockholm, Sweden, a company of Sweden. Application Jan. 28, 1944, Serial No. 520,090. In Sweden Dec. 11, 1942. 1 Claim. (Cl. 257—229.)**



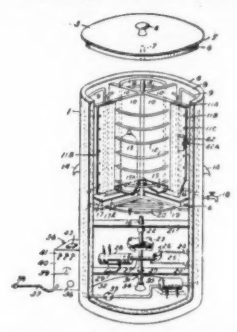
A heat exchanger comprising a substantially cylindrical shell, a plurality of conduits within said shell, each conduit being in the form of a substantially right helicoid and said helicoids being concentric and of equal size and pitch and the turns thereof being equally spaced from each other thereby forming a plurality of helicoidal passageways of substantially uniform cross-sectional shape through said cylindrical shell, the cross-section of each conduit as cut by a plane through the axis of the cylinder being substantially rectangular and the dimension of said cross-section perpendicular to the axis of the cylinder being substantially equal to the radius of the cylindrical shell and at least several times the dimension of the cross-section of the conduit parallel to the axis of the cylindrical shell, means for passing a fluid through said conduits and means for passing another fluid through said passageways.

**2,449,824. CONTROLLED HUMIDITY REFRIGERATOR. Malcolm G. Shoemaker, Abington, Pa., assignor, by mesne assignments, to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Feb. 28, 1945, Serial No. 580,109. 10 Claims. (Cl. 62—6.)**



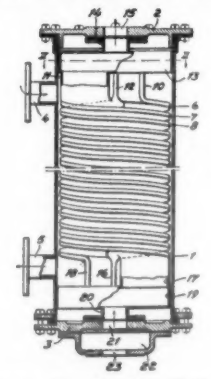
1. In a refrigerator, a storage compartment, evaporator means adapted to maintain wall portions of said compartment at a refrigerating temperature whereby to cool the compartment, evaporator means within said compartment affording a surface maintained at a temperature lower than the temperature at which said wall portions are maintained and upon which surface the deposition of moisture is substantially localized, means normally preventing contact of compartment air with said surface, and humidity-responsive means for effecting intermittent circulation of the compartment air in heat exchange relation with said surface.

**2,449,874. MACHINE FOR THE AUTOMATIC COOLING AND HEATING OF BABY BOTTLES AND FOOD. James Milman Bruning, Mount Vernon, Wash.**



1. A machine for the automatic cooling and heating of baby bottles and food comprising a heat insulated container, a rotary support for the bottles mounted in said container, means dividing said support into compartments, refrigerant means for cooling the bottles in certain of said compartments, heating means disposed in a station opposite one compartment, and means for intermittently rotating said compartments to and past said heating station.

**2,449,922. COOLER FOR VISCOUS LIQUIDS. Soren K. Anderson, Los Angeles, Calif., assignor to the Garrett Corp., Airesearch Mfg. Co. division, Los Angeles, Calif., a corporation of California. Application March 10, 1945, Serial No. 582,080. 12 Claims. (Cl. 257—128.)**



3. A cooler for liquids that the viscous when cold, comprising: a shell; means cooperating with the outer surface of said shell to define a warm up chamber from which heat may be imparted to the shell; a baffle means dividing the space within the shell into a series of flow chambers, each having at least one extremity in contact with a heated area of the inner surface of the shell; liquid inlet and outlet means connected to respective chambers, said baffle means being provided with port means connecting said chambers in series between said inlet and outlet means to define a tortuous flow path through the cooler; a core comprising a bundle of parallel open ended tubes within each of said chambers, arranged in rows generally parallel to said baffle means, the majority of said tubes of each bundle being relatively closely spaced, to provide relatively restricted passages for efficient heat exchange between liquid flowing in said passages and coolant passing through said tubes; means defining between each baffle plate and an adjacent row of tubes, a continous core penetrating free flow passage of less resistance than said restricted passages under congealment conditions in which the liquid tends to congeal upon the tubes; and means defining between the aforesaid heated areas of said shell and the adjacent tubes, peripheral free flow passages of less resistance to flow than said restricted passages connecting the said core penetrating free flow passages to said inlet and outlet means respectively.

*(To Be Continued)*

AIR CONDITIONING & REFRIGERATION NEWS
450 W. Fort St., Detroit 26, Mich.

Gentlemen: Send the NEWS for one year.

☐ $5 enclosed ☐ Bill me ☐ Bill the company

Name.....

Company.....

Street.....

City.....Zone.....State.....

12-27-48

## Packtor, Phillips-Fruth, Neill To Handle McQuay Air Conditioning Items

MINNEAPOLIS — Appointment of three new representatives for McQuay heating and air conditioning products has been announced by H. Blake Thomas, general sales manager for McQuay, Inc. here.

B. M. Packtor

One of the new representatives, Bernard M. Packtor of New Haven, Conn., also hanles McQuay commercial refrigeration equipment, according to Thomas. Packtor is refrigeration representative in all the New England states and New York as far west as Rochester but excluding the metropolitan New York City area.

Packtor will be heating and air conditioning representative in western Massachusetts, Rhode Island, Vermont, and Connecticut excepting the southeastern section.

The other new representatives are the Phillips-Fruth Co. of Toledo, and C. L. Neill of Neill Equipment Co., Omaha, Neb. Phillips-Fruth will cover the Toledo area, and Neill will take in the entire state of Nebraska plus the southwestern corner of Iowa.

Packtor, for the past two and a half years has been active as a manufacturer's representative and engineer. Prior to that time he had been associated with Worthington Pump & Machinery Co. and the Carrier Corp.

Both R. I. Fruth and O. L. Phillips of the Toledo firm had been associated with electronic and air conditioning companies prior to their McQuay appointment.

Neill established his sales representative firm in 1947 after a tour of wartime service with the Smaller War Plants Corp. here and postwar duty in the Department of Commerce.

## Heat Pump In Chicago Suburban Home Uses Combined Ground, Air Coils

MT. PROSPECT, Ill.—Year-round air conditioning from a heat pump employing both ground and air coils has been incorporated in a new six-room ranch-type house in this Chicago suburb.

This installation is believed to be the first of its kind in this latitude to incorporate the combination of air and ground coils, according to Roy E. Hammond, the owner, and G. D. Wetherbee, Chicago refrigeration engineer who was closely associated in planning the system with Murphy & Miller, contracting firm.

On cold winter days, the heat pump will extract heat from the buried pipe coils; on mild days when the outdoor temperatures range between 25° and 30° F., heat will be taken from the atmosphere through air coils. When the temperature is at an in-between stage (from 15° to 25°), heat will be supplied to the system by both sets of coils.

The system has been so designed, however, that the earth surrounding the coils will be "recharged" with heat when the outdoor winter temperature rises above 30°. The earth, will thus act as a storage medium as well as the original source of heat for extremely cold days.

An automatic switch claimed to be simple in design and operation handles the change-over from earth to ground coils, it is said.

Hottest part of the heating system will be 130° F., according to Hammond, where recirculated air is raised to 110° F. for circulation through conventional ducts and grilles. As a by-product, water will also be pre-heated by the system.

The refrigerating unit employed is a 5-hp. machine, and the system is expected to have a coefficient of performance around 3.0. Ground coils consist of copper tubes buried 6 ft. deep in trenches in the yard, while the air coil is a finned coil mounted on the south wall of the garage.

## Fedders Distributor Builds Florida Dealer Organization

MIAMI, Fla.—The beginnings of a dealer organization to handle Fedders room air conditioners in the Florida area south of Melbourne was launched recently by Russ and Dorothy Gray, Fedders distributors here.

Representatives of four dealerships in the area, the first to be franchised with the Fedders line for 1949, gathered in the distributor's offices here for briefing on the manufacturer and his product.

All servicemen were shown how to uncrate, set up, and service each unit before delivery, according to Russ Gray. Particular attention was paid to properly oiling the mechanism for smooth operation, he added.

The four dealerships represented were Lowry Electric, Stewart Cooling Corp., Kent Appliances, and Atlantic Air Conditioning.

Burdine's, a local department store, had the exclusive Fedders franchise this year. Russ and Dorothy Gray expect to add more dealers in their territory later.

## Pan-American Air Conditioning Co. Chartered To Operate In Miami

MIAMI, Fla. — Pan-American Air Conditioning Co. of this city has just received a charter from the secretary of state. Authorized capital stock is 99 shares, no par value. Jack Newman, Jewel T. Newman, and Erma Guarino were the incorporators.

## Plant's Employes Dine In Air Conditioned Cafeteria

TAMPA, Fla.—More than 600 employes of the U. S. Phosphoric Corp. chemical plant at Gibsonton had their first opportunity to eat a hot meal with the opening of the plant's new, air conditioned cafeteria built at a cost of more than $125,000.

Prior to the opening of the cafeteria employes had to bring their own meals or leave the plant grounds to eat in small stands and restaurants along the Tampa-Ruskin highway. B. W. Bellinger, plant manager, said meals in the new cafeteria would be sold at minimum prices on a no-profit basis.

## Lectrodryer Bulletin Deals With Performance of Solid Adsorption Dehumidifier

PITTSBURGH—A new bulletin entitled "The Performance of A Solid Adsorption Dehumidifier" has been published by Pittsburgh Lectrodryer Corp., manufacturer of dehumidification equipment, and is ready for distribution, the company has announced.

Written by Lectrodryer consulting engineers E. R. Queer, professor of engineering research, and E. R. McLaughlin, associate professor of engineering research, Pennsylvania State college, the new bulletin is said to depart from the usual style of catalog or advertising mailing piece.

"Its approach to the subject matter is more in conformity with that of a scientific paper dealing with important recent developments in the use of solid adsoption for the control of humidity," the firm said. "Professors Queer and McLaughlin explain the work done to establish a method of testing dehumidification equipment to meet the demands of the U. S. Navy in its many projects for the reduction of humidity in inactive ships, aircraft, and storage facilities housing supplies and replacement parts.

"The bulletin also reports for the first time on a novel method of plotting the performance of the solid adsorption type dehumidifier on a physcrometric chart. Another chart will be of particular interest to those who want a technical explanation of the phenomena that occurs with respect to relative humidity within sealed containers under various conditions of temperature."

Designated as Bulletin 214, the publication may be obtained without cost from Pittsburgh Lectrodryer Corp., P. O. Box 1766, Pittsburgh, Pa.

insist on genuine Marlo products
MARLO = HEAT TRANSFER Since 1925

Maximum EFFICIENCY • Minimum ATTENTION
Precision manufacture gives Larkin refrigeration products life-time top performance and lasting fortitude. Made by the originators of the patented Cross Fin Coil, Larkin is the recognized leader in precision manufacture of Larkin Humi-Temp Forced Convection Units — Bare Tube and Zinc Fused Steel Plate Coils — Air Conditioning Units — Instantaneous Water Coolers — Evaporative Condensers — and all other equipment factors used in dependable commercial and industrial refrigeration.
THE WATCH DOG OF THE NATION'S FOOD SUPPLY
LARKIN COILS 519 MEMORIAL DRIVE • S•E• ATLANTA • GEORGIA

Be Smart! Get the New No. 148 Fall and Winter DEPENDABOOK
HARRY ALTER'S REFRIGERATION PARTS CATALOG
WHOLESALE ONLY
A catalog issued to and for the trade only...Write—NOW—on your letterhead, for your copy of the most nearly complete refrigeration-parts-and-supplies catalog in the business—the new DEPENDABOOK!
The HARRY ALTER CO. 1728 S. MICHIGAN AVE. CHICAGO 16, ILL. 134 LaFayette St., New York 13, N. Y.

Diffusion Type UNIT HEATERS For low-pressure steam and hot water
Wall and Ceiling DIFFUSERS
M&E EST. 1866
For all above-freezing applications CATALOG ON REQUEST
MERCHANT & EVANS CO. PHILA. 46, PA.

# CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion 50 words or under. 5¢ ea. additional word.

RATES for all other classifications $5.00 per insertion 50 words or under. 10¢ ea. additional word.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

### POSITIONS WANTED

EXPORT MANAGER (or assistant to manager) with exact knowledge of international markets; widely travelled; 5 modern languages; first rate references—available. Letters under BOX 3037, Air Conditioning & Refrigeration News.

MAN WITH 20 years experience in sales and engineering of refrigeration products with national coverage desires to locate in Detroit area. Offers exceptional record of performance and proved ability. Complete details on background and experience will be sent on request or will welcome personal interviews. BOX 3048, Air Conditioning & Refrigeration News.

MANUFACTURERS' REPRESENTATIVE would like to hear from manufacturers desiring coverage of dealers and distributors of commercial refrigeration equipment and supplies. Pennsylvania, New Jersey, Delaware, Maryland and Virginia. Twenty years experience walk-in coolers, display cases, refrigerators, refrigeration and air conditioning equipment. BOX 3051, Air Conditioning & Refrigeration News.

ASSISTANT MASTER mechanic with southwest industrial plant desires change. Graduate engineer, experience in industrial and construction engineering. Two years in Navy, recent graduate of International Correspondence Schools in air conditioning and refrigeration. Now studying typical installations. Would like connection with southern dealer or distributor of recognized air conditioning equipment. Age 38, good personality, married, one child. Write BOX 3053, Air Conditioning & Refrigeration News.

REFRIGERATION, AIR conditioning and electrical work. Experience as both mechanic and engineer. Installation, service, wiring, application. Technical education, age 45. Know sales and merchandising. Desire connection in any capacity or all around. New York area or southern states. Salary moderate. Available immediately. BOX 3054, Air Conditioning & Refrigeration News.

### POSITIONS AVAILABLE

WANTED A factory sales engineer representative in the South to contact distributors and generally represent the factory. Location—Louisiana. BAKER ICE MACHINE CO., INC., South Windham, Maine.

ORLANDO, FLORIDA sunshine. Opportunity for an experienced commercial refrigeration salesman who can sell. This is a lucrative position for a go-getter, who is interested in year around summer weather, with one of Florida's most aggressive Frigidaire distributors. WATERS EQUIPMENT CO., 1215 West Central Ave., Orlando, Florida.

WANTED—SALES manager to do an aggressive job for established distributor of nationally known and accepted line of display cases, reach-ins, walk-ins, etc. Must be capable of rounding out existing sales personnel, training, store planning for minimum annual volume of $500,000. Large midwestern city—excellent remuneration. BOX 3027, Air Conditioning & Refrigeration News.

OLD ESTABLISHED York distributor located in North Carolina has opening for experienced commercial refrigeration sales manager to assume complete responsibility for formulating and executing sales activities. Only man thoroughly experienced in refrigeration and air conditioning who has proven executive and sales ability will be considered. The man we want now has responsible sales managerial position and is successful but wants to go further with an organization with unlimited possibilities. Liberal salary plus override on sales volume. Give full details of experience and qualifications. Interview will be arranged. BOX 3035, Air Conditioning & Refrigeration News.

OLD ESTABLISHED York distributor located in North Carolina has opening for experienced refrigeration and air conditioning sales engineer. Must be capable of passing examination state board of engineers and securing license in air conditioning engineering. If not now a resident of N. C., interim license may be arranged pending examination. Write stating experience, qualifications, and salary and commission expected. BOX 3036, Air Conditioning & Refrigeration News.

MANUFACTURER'S REPRESENTATIVES:—wanted by nationally known manufacturer of commercial electric water coolers for office, factory, etc. Men must have experience and call on distributors, dealers, water companies, and rental companies. Compensation, commission. State fully background, experience, lines currently handled, territory covered, and references. BOX 3047, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION sales manager—distributor for 14 years handling leading national brand with complete line of commercial refrigeration and air conditioning equipment and having territory covering states of Arizona, New Mexico, and portion of Texas, has opening for sales manager. Prefer person having experience selling commercial refrigeration and air conditioning equipment and capable of developing aggressive dealer organization. Good opportunity and future with remuneration on the basis of salary plus percentage on sales. Traveling expenses paid and car furnished. Headquarters in El Paso, Texas. Write, giving full details as to qualifications, experience, age, etc. and enclose photo. BOX 3052, Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

OVERSTOCKED ITEMS—less than manufacturers' costs, new in original crates or cartons including Universal Cooler and Tecumseh condensing units. White-Rodgers controls, Detroit Lubricator expansion valves and solenoid valves, Allen-Bradley relays, Betz and Krack unit coolers, many other items. Write for price list. AMANA SOCIETY, Refrigeration Division, Amana, Iowa.

SURPLUS "FREON" valves! 1,500 new clean valves priced under jobbers cost, freight prepaid. Kerotest # 461S 2⅛" wing-cap globe @ $19.76. # 574S 1⅛" wing-cap globe @ $8.55. #6981S ¾" angle packless @ $3.00. #2355 ¾" receiver valves @ 75¢. #51S300 ⅝" relief @ $3.45. Mueller ⅜" flare packed globe @ 85¢. ANCHOR SUPPLY CO., 1742 Fourth South, Seattle 4, Wash.

RECORDING THERMOMETERS, Bristol, remote 7 day electric, $69. Thermostats, Mercoid, minus 10° to plus 40°, $15. Heat exchangers, Acme, 3 ton @ $27; 2 ton @ $20. Evaporative condensers, Marlo E C 5, $335. Tunnel blast freezer complete 1,800 basic rating, $535. New 1 H.P. to 7½ H.P. water cooled Universal and Copelands at less than distributor's cost. Used Westinghouse 60 ton condensing unit—bargain! 3'6" x 6'6" Jamison double batton automatic close doors with track heads for 7'2" track, 1½" cork board insulation at $95 each. All new in original factory crates. BIMEL COMPANY, 2600 Colerain Ave., Cincinnati 14, Ohio.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed), Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 3906 Joy Rd., Detroit 6, Michigan.

BRAND NEW freezer plates, all or any part: 26—Dole plates 19" x 78" @ $8.00. 129—Dole plates 19" x 32" @ $3.75. 369—Yoder plates 19" x 30" @ $3.35. 110—Yoder plates 19" x 72" @ $7.00. All Dole plates fitted with two ½" female pipe connections on the 19" end. All Yoder plates fitted with two ½" male copper tube connections on the 19" end. All plates for use in vertical installations. Send checks or deposits with order to CROWN REFRIGERATOR CORP., P.O. Box, Metuchen, N. J.

FOR SALE, 12 Panelectric cuberators, new & casted: $145.00 ea. Write RHODES BROS., Box 5, Arlington Heights, Ill.

7½ AND 10 H.P. General Electric CM83T "Freon" condensing units at 10% less than distributors cost, current models, new, crated. Fill your requirements while our stock lasts. BOX 3042, Air Conditioning & Refrigeration News.

### BUSINESS OPPORTUNITIES

RESTAURANT, HOTEL and bar supplies department for sale of Wright Refrigeration in San Diego, California. A truly wonderful opportunity for someone experienced in restaurant and hotel supplies business. Get the details, you will really be surprised that such an opportunity is available. WRIGHT REFRIGERATION, 4025 Pacific Highway, San Diego, California.

MIAMI, FLORIDA—a leading refrigeration, air conditioning, television, and appliance sales and service establishment—in same Miami location ten years. Grossed $150,000 and netted $20,000 last year. Will sell for $7,500 to cover truck, equipment, and improvements plus merchandise inventory at cost—about $8,000. BOX 2992, Air Conditioning & Refrigeration News.

PARTNER WANTED—for established commercial and air conditioning business located in northern New Jersey city. Sales or mechanical experience and business ability just as essential as capital—real opportunity for either a sales engineer or service supervisor. Present owner can handle either end. BOX 3022, Air Conditioning & Refrigeration News.

PARTNER WANTED—for established air conditioning and commercial refrigeration business in New York City. Have valuable dealerships. Sales ability and experience in line more essential than capital. Real opportunity for right party. BOX 3049, Air Conditioning & Refrigeration News.

for draft and bottle beverage coolers...
IDEAL Speed-Freeze PRODUCTS
IDEAL COOLER CORPORATION 2953 EASTON AVE., ST. LOUIS 6, MO.

## U.S. Decree Ends Bendix, Telecoin Restrictive Agreements for Dealers

NEW YORK CITY—All restrictive agreements imposed by Bendix Home Appliances, Inc. and the Telecoin Corp. on their dealers or laundry operators were terminated as a result of a judgment and decree issued recently by Judge C. Knox of U. S. Federal Court here.

The judgment ends a two-year old anti-trust suit instituted by the Department of Justice against Bendix and Telecoin charging the two firms with conspiracy in the distribution, sale, and rental of Bendix automatic washing machines.

Irving B. Glickfeld, special assistant to the attorney general, and prosecutor of the suit, said that the purchase price is the only string now attached to the purchase of a Bendix washer by anyone.

Glickfeld had told the judge that Bendix in its arrangements with distributors and, through the distributors, with the dealers, fixed retail prices, established exclusive sales territories, required exclusive use of Bendix parts in service operations, prohibited dealers from selling Bendix machines for rental use, and permitted distributors to make such sales only to Telecoin.

Bendix' agreement with Telecoin, which was franchised to handle all sales to apartment houses and laundries, required maintenance of fixed uniform rental charges, required payment of monthly fees to Telecoin, and required operators to buy soap and other materials from Telecoin.

Glickfeld asserted that entry of the decree lifts all restrictions, provides safeguards against revival of objectionable practices, and restores free and open competition in the industry.

## *Pre-War Sales Tactics--*

*(Concluded from Page 1, Column 2)*

Duke Doyle, owner of two neighborhood appliance shops, starting a "savings account club" for potential customers. Under his plan, customers can make weekly payments of as little as $1 toward a down payment on an appliance.

In New York City and vicinity, the paper noted that Times Square Stores Corp., among others, is cutting prices by offering 15% off on "slightly scratched" floor model refrigerators.

Raymond Rosen, Philadelphia appliance distributor, predicted, according to the *Journal*, that 1949 will see the entire industry returning to the old pre-war "blue book" which gave accepted trade-in values for most appliances.

A hint of what is in store for dealer and distributor salesmen was given by Rex L. Jacobs, president of F. L. Jacobs Co., manufacturer of Launderall washing machines. He said that some of his dealers have already told their salesmen to sell one washer a day—or else.

## Staebler, of Universal Cooler, Discusses Capillaries Jan. 3

DETROIT—"Design of Refrigeration Systems for Capillary Tube Applications" will be discussed by Lloyd Staebler of Universal Cooler before the Detroit Section of the American Society of Refrigerating Engineers at the Rackham bldg. here Monday evening, Jan. 3, at 7:45 o'clock.

## D & H Distributors Sets Up

ALBANY, N. Y.—A new corporation, D & H Distributors, Inc., has been organized here to carry on a wholesale appliance business. The firm will be located at 448 N. Pearl St.

## *Assume New Jobs*

A. M. Younger

L. G. Fox

* * *

## Fox, Younger Are Among 4 Named To Wolverine Posts

DETROIT — Wolverine Tube Div. of the Calumet & Hecla Consolidated Copper Co. has announced the appointment of A. M. Younger, formerly general manager for the Atlas Mineral Products Co., as manager of Southwestern sales for the division.

Younger will headquarter in the company's office in Houston, Tex. He succeeds L. G. Fox who has returned to the company's office here to assume special assignments.

J. L. Young, Jr., will also work from the Houston office and with A. S. Williams, of Dallas, Tex., will represent Wolverine throughout Texas, Oklahoma, Arkansas, and Louisiana. Young comes to the company from the Kelly-Springfield Tire Co.

## *Mobilization Plans--*

*(Concluded from Page 1, Column 4)*

Kelvinator Corp.; D. Nason, Crosley Div., Avco Mfg. Corp.; O. L. Wertz, Frigidaire Div., General Motors Corp.; G. H. Smith, Deepfreeze Div., Motor Products Corp.; C. J. Gibson, Jr., Gibson Refrigerator Co.; J. E. Kerr, Norge Div., Borg-Warner Corp.; Reese Mills, Westinghouse Electric Corp.; and Louis Ruthenburg, Servel, Inc.

Also in attendance was E. G. Vail, representing the National Association of Ice Refrigerator Manufacturers.

## 2 Steel Companies Cut Prices on 'Extras'

NEW YORK CITY—Two Subsidiaries of United States Steel Corp.—Carnegie-Illinois Steel Corp. and American Steel and Wire Co.—have reduced prices on extras for several of their stainless steel products by an average of 5%.

American Steel and Wire products affected include cold-rolled strip, cold fininshed bars, and wire. Among Carnegie-Illinois products involved are plates, sheets, bars, strip, and forging billets.

The companies said the price reductions were made to maintain competitive positions and to extend the use of stainless steel.

## *Store Modernization Group Issues Clinic Talks Booklet*

NEW YORK CITY—A Compilation of addresses given at the second annual Store Modernization Show held here last summer is now available in book form.

Called "1948 Store Modernization Clinics," the book includes detailed questions and answers that arose in informal discussions with audience participation. Addresses and discussions covered store fronts, layout and traffic, lighting and color, displays and fixturing, and planning and budgeting.

The book may be ordered from the Store Modernization Show, 40 East 49th St., New York 17, N. Y. Price is $5.

## Industry Representatives Oppose N.Y. Credit Bill

NEW YORK CITY—Proposed New York legislation to regulate interest rates and other practices of finance companies in connection with instalment sales was strongly opposed by industry representatives at a hearing conducted here recently by the Joint State Legislation Committee to Study Instalment Sales.

Following the hearing, Senator J. Raymond McGovern, New Rochelle Republican who heads the committee, said the objections would be considered by the committee but would not prevent introduction of regulatory legislation in the 1949 State Legislature

The hearing was held for discussion of a tentative bill, proposing that interest rates in the financing of motor vehicles, appliances, and other goods bought on conditional sales contracts be limited to 1% a month on the unpaid balances.

The measure also would require that contracts clearly set forth the purpose of various charges, that the charge for insurance be limited to the actual cost of the premium and that the unused portion of finance charges be returned to the buyer when contracts are prepaid.

Some speakers at the hearing objected to the bill in its entirety on the claim that any regulation was undesirable, but most of the protests were directed against the 1% interest charge and a penalty provision that would void contracts when violations occurred, thus making it possible for a purchaser to keep merchandise and stop payment.

## *Some Layoff Stories Misleading--*

*(Concluded from Page 1, Column 5)*

proved in the past few years, continued strong.

"This is substantiated by the fact that even after the contemplated layoff there will still be about 2,850 employes in the production departments compared with 2,650 a year ago and compared with an average of 1,436 employes during the pre-war period 1936-1939."

Apex Electrical Mfg. Co., which is reducing its working force by about one third, has established—with the agreement and assistance of the unions—a placement bureau for laid-off workers, called the Apex Placement Bureau. The unit has started a job-finding canvass of Cleveland industry for the dismissed employes.

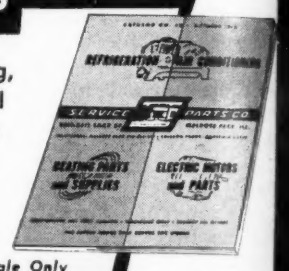
Some of the reductions in production forces were in extra shifts. At the Coolerator Co. plants in Duluth there were layoffs in the second shift. Another manufacturer which eliminated a night shift absorbed most of the employes in an increased day shift operation.

On the other side of the picture, Westinghouse Electric Corp.'s appliance division in Mansfield, Ohio was reported approaching the new year with lower inventories than in any prewar year, with no production employe layoffs but with some temporary production shutdowns resulting from a changeover to new models.

Some layoffs and plant shutdowns in the fractional horsepower motor field indicate that production has caught up with the order backlog. General Motors shut down a foundry that had been making castings for motors "because of lack of demand," and General Electric is reported to be closing its Kokomo, Ind. plant Jan. 1 because of lack of motor orders, and Westinghouse has been cutting employment at its Lima, Ohio motor plant although 2,700 are still employed.


ANYTHING AND EVERYTHING YOU NEED

. . . in Refrigeration, Air Conditioning, Heating Parts and Supplies . . . selected from our complete stocks . . . the same day your order's received . . . by competent experienced men. A can't-be-beat time and money-saving help for you!



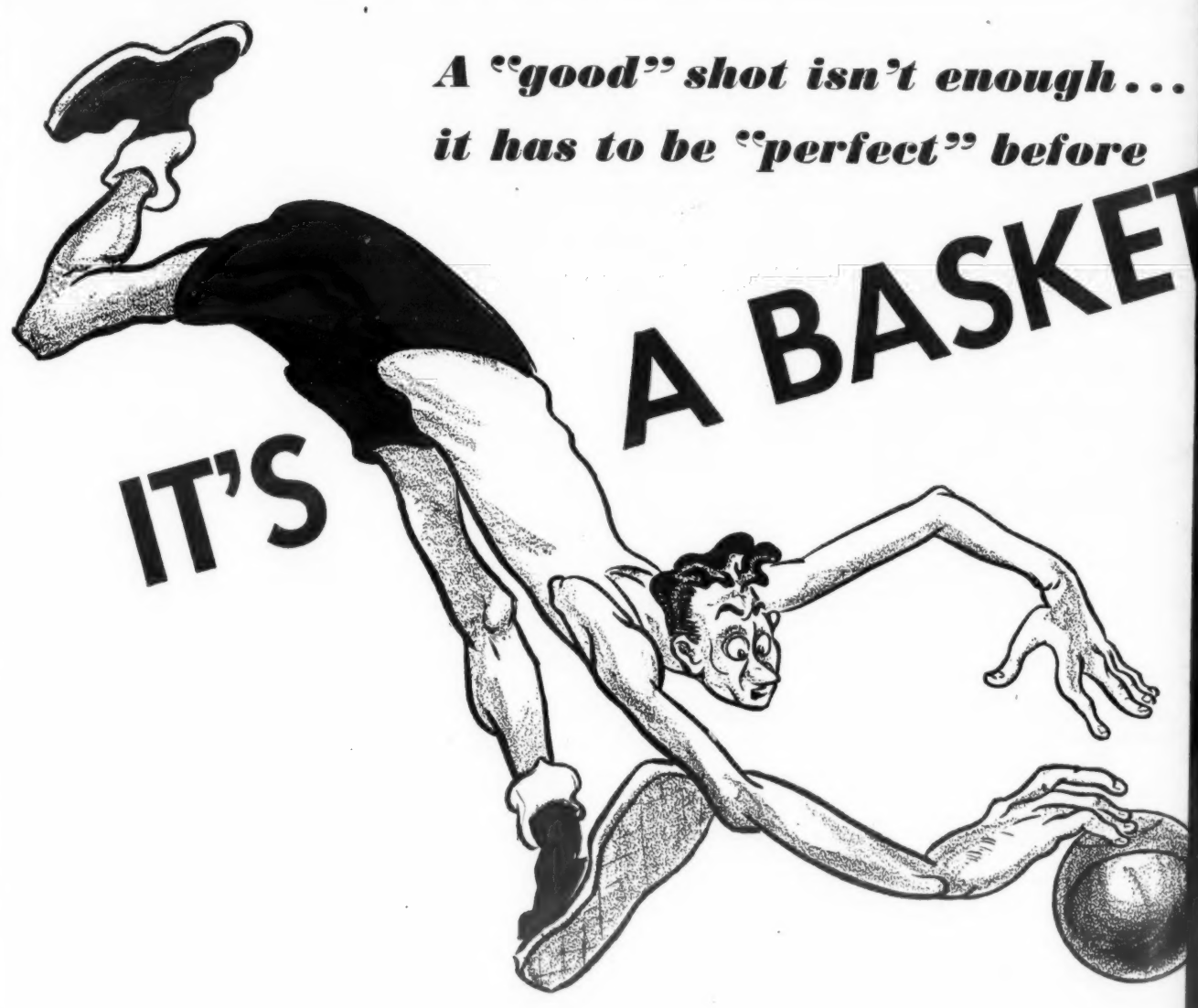
THE SUPPLY HOUSE THAT SERVES THE WORLD • Wholesale Only

SERVICE SP PARTS CO.

2511 2611 LAKE STREET MELROSE PARK, ILLINOIS

Send for catalog today!

A "good" shot isn't enough . . . it has to be "perfect" before IT'S A BASKET



NATURALLY, none of us makes a "basket" on every shot . . . but, assuming an equal number of trys, the team with the highest percentage of success always wins. Any sports fan knows it to be a fact.

Let's look at the record. BUSH sales have multiplied ten times in the last ten years . . . with an increase *every* year. This success was made possible by expert design, superior engineering, quality materials, better workmanship and an organization which, we believe, is equal to any in the business.

We think that's pretty close to a "basket". But let the record speak for itself . . . as sports fan say.

You're shooting for "baskets", too. And the products you specify play a considerable part in determining your percentage of success. So look at the record when you plan that next job. Decide whether it's to be just another good shot or a "basket" . . . whether it's just another try or a win.

Decide to *"Buy the Best . . . and the Best is BUSH."*

BUSH *Heat Transfer Products are* AVAILABLE NOW *through refrigeration and air conditioning wholesalers everywhere. Write* Dept. C3 *for Catalog.*

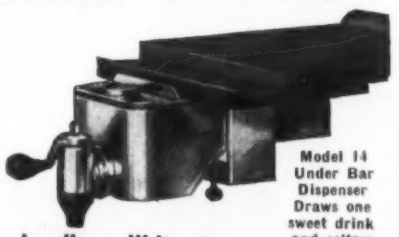
BUSH MANUFACTURING CO. • WEST HARTFORD 10, CONN.

Bush HEAT TRANSFER PRODUCTS

DEALERS - DISTRIBUTORS WANTED!

If you are prepared to handle sales, installation and service for our stainless steel soft drink Dispensers for Bars and Taverns, advise business experience and some facts relative to your financial ability.

INCREASES PROFITS FOR BARS AND TAVERNS



Model 14 Under Bar Dispenser Draws one sweet drink and seltzer

*Exceptionally profitable to handle.— Write to*

MULTIPLEX FAUCET CO. 4325 DUNCAN, ST. LOUIS, MO.

MANUFACTURERS OF SOFT DRINK DISPENSERS OVER 43 YEARS